

FIFTEEN MILITARY HIGHLIGHTS OF THE YEAR



1. Jan. 23—British take Tripoli.
2. Feb. 2—German resistance ended at Stalingrad.
3. Feb. 24—Bombing of Wilhelmshaven opens "round-the-clock" Allied attacks on Germany.
4. May 7—Allies take Tunis and Bizerte, ending Battle of Africa.
5. July 10—Allies invade Sicily.
6. July 12—Russians open summer offensive.
7. Aug. 15—Americans retake Kiska.

8. Aug. 25—Mountbatten appointed commander of Southeastern Asia.
9. Sept. 3—British land in Italy.
10. Nov. 21—Americans invade Gilbert Islands.
11. Nov. 28—Dec. 1—Tehran meeting maps Allied strategy.
12. Dec. 9—Chinese recapture Changteh.
13. Dec. 16—Allied forces land on New Britain.
14. Dec. 26—British sink the *Scharnhorst*.
15. Dec. 30—Russians win Battle of the Kiev bulge.

**THE NEW
INTERNATIONAL
YEAR BOOK**

THE NEW INTERNATIONAL Year Book

A COMPENDIUM OF
THE WORLD'S PROGRESS
FOR THE YEAR
1943

EDITOR

CHARLES EARLE FUNK, LITT.D.

ASSOCIATE EDITORS

RONALD STUART KAIN, MAMIE HARMON



FUNK & WAGNALLS COMPANY

NEW YORK AND LONDON

1944

~~This Book is Manufactured Under Wartime Conditions in Conformity with All Government
Regulations Controlling the Use of Paper and Other Materials~~

COPYRIGHT, 1944, BY
FUNK & WAGNALLS COMPANY
[Printed in the United States of America]

FOREWORD KANSAS CITY

The preceding volume in this series of YEAR BOOKS reported the feverish activities resulting from a sudden envelopment of the entire world within a cloud of war through which, for a time, few bright spots appeared. In this record of the year 1943, although the cloud still covers the earth, the activities, none the less unremitting, are seen to have become more effectively organized and the bright spots somewhat more numerous. The giant of peacetime industry, commerce, science, and art, suddenly paralyzed and diverted from its normal course, has taken stock of its abilities, has re-oriented itself, has developed unexpected talents, and is now in full stride.

The goal, however, is not merely to dispel the present cloud of war, but—so great have been the strides and so certain the ultimate success—to establish permanent machinery for an enduring peace among all nations. The intellect of the world is engaged upon that problem; it is the paramount thought among all peoples. There is scarcely an article among the hundreds in these pages which does not in some respect touch upon the attainment of that goal. Success upon the battle fronts must come first, and, as these pages show, there has been no relaxation in the war effort, but there will be a greater willingness among all nations to lay down arms and accept the terms of the victors if a just plan has been developed which will enable all peoples to live on equal terms with their neighbors. The theme in the preceding YEAR BOOK was of a world engaged in war; in this issue it may be described as a world groping toward permanent peace.

It is the constant aim of the editor to provide the most authoritative coverage of the records of the year that is obtainable. Each contributor is selected for his intimate knowledge of the field that he represents and for his recognized standing in that field. The book is thus not merely a source book from which future historians may derive an inestimable first-hand account of the happenings of the year 1943 in every major field of activity, but it is a "fact book," a current encyclopedia, by which any consultant may keep pace with the developments in the branch of learning, of industry, sport, or art in which he is interested or seeks to obtain data. Thus the reader may turn to MUSIC, and see how there has been an upsurge of interest in the ballet in this country; or he may turn to BASKETBALL to see what teams were the leading contenders in this sport. He may turn to TAXATION, for an analysis of this economic problem in 1943; or he may turn to RADIO, MOTION PICTURES, and THEATER, to see what were the outstanding performances in these fields. WORLD WAR II and the histories and internal developments in all countries are covered with the customary painstaking accuracy.

The full list of contributors to this volume is shown in the following pages. Many on that list have appeared in previous issues of the YEAR BOOK; to them the editor would express his sincere appreciation for their continued cooperation in the production of this work. Some who have contributed in recent past years were, through wartime emergencies, unable to continue the association. One valued contributor over a number of years, Professor Albert Schinz, completed his annual review of FRENCH LITERATURE just a few days before his death. Many will join the editor in regret over the loss of his able reviews.

A welcome is extended to our new contributors. Mr. John B. Powell, noted correspondent on Far Eastern affairs and editor of the *China Weekly Review* (Shanghai) for many years, now recovering from injury suffered in a Japanese internment camp, has prepared the historical and political sections of the articles CHINA, JAPAN, and RUSSIA. Mr. C. P. Trussell, Washington correspondent of *The New York Times*, in the article on the UNITED STATES has described with remarkable comprehensiveness the intricate Washington scene; Major Charles F. Reid now of the Army Air Forces School of Applied Tactics, has covered the several territories and dependencies of the United States, and Mr. Herbert Wiltsee, of the Council of State Governments has excellently compiled the acts of the various State legislative bodies into STATE LEGISLATION, a comparative review introduced for the first time in this edition. The historical section of CANADA is the work of Dr. Alzada Comstock, professor of economics Mount Holyoke College. Professor D. F. Fleming, of Vanderbilt University, noted authority

on political science, has contributed the review of the WORLD WAR during 1943, and Professor Grayson Kirk of Columbia University, who is also Research Associate of the Institute of International Studies, Yale University, is the author of the article, UNITED NATIONS. The subject, REFUGEES, closely related to the war, is the work of Mr. George L. Warren, Executive Secretary of the President's Advisory Committee on Political Refugees.

In the non-political fields, Mr. H. E. Luedicke, Business News Editor of *The Journal of Commerce*, has prepared a number of excellent articles on various branches of industry and business, notably upon the FOOD INDUSTRY. The field of sports has been ably handled by Mr. Thomas V. Haney, of the staff of *The New York Times*. A new feature, MAGAZINES, has been interestingly covered by Mr. A. S. Burack, Editor of *The Writer*. INSURANCE has been reviewed by Mr. Mervin Lane, an insurance broker and the author of several textbooks on that subject. MUSIC is reviewed by Mr. Eugene Bonner, noted critic and formerly music editor of *The Outlook*. The several articles on the various minerals and metals, of crucial interest at the present time, are the careful work of Mr. Charles T. Post, regional news and technical editor of *The Iron Age*. And Dr. W. H. Potts, of the Southwestern Medical Foundation School of Medicine, has furnished the article MEDICINE AND SURGERY. The return of Miss Leila Mechlin to the Contributors staff is also welcomed.

Due to the fact that many of the technical and scientific articles contain information pertaining to military matters, all of such articles are regularly referred to the Review Branch, Bureau of Public Relations, U.S. War Department, before publication. Although all such information has been garnered from material that has appeared in one or more of a wide number of technical journals, there are at times military reasons that have led to a request for the omission of certain information. In one or two instances, despite the courtesies extended by the Review Branch, it has been impossible to clear the material and make the necessary omissions without leaving a gap in the page and unsatisfied cross references. The Editor can do no more than to explain the circumstances.

The Editor is especially grateful to the various members of his staff who, by relieving him of the majority of the details involved in the compilation of a reference work of this scope and magnitude, enabled him to concentrate most of his time and energy upon other important work on which he has been engaged. Without that competent assistance one work or the other would necessarily have been neglected. He thanks each of them, especially Mr. Ronald S. Kain, upon whose advice he leaned in the selection of various authorities in the political arena, and Miss Mamie Harmon, whom he regarded in this work as his alter ego and to whom, with the cooperation of the Kingsport Press, is largely due the credit for the publication of this book earlier in the year than any of its previous companions.

CHARLES EARLE FUNK

EDITOR

Charles Earle Funk, Litt.D.

LIST OF CONTRIBUTORS

- Arthur J. Altmeyer**
Chairman, Social Security Board
SOCIAL SECURITY BOARD
- Hubert N. Alyea, Ph.D.**
Assistant Professor of Chemistry, Princeton University
BOMBS; CHEMISTRY; PLASTICS; RUBBER
- Mary Anderson**
Director, Women's Bureau, U.S. Department of Labor
WOMEN'S BUREAU
- P. N. Annand, B.S., M.A., Ph.D.**
Chief, Bureau of Entomology and Plant Quarantine, U.S. Department of Agriculture
INSECT PESTS AND PLANT QUARANTINES
- Harry J. Anslinger, LL.B.**
Commissioner of Narcotics, Treasury Department
NARCOTIC DRUGS CONTROL
- Howard Barnes**
Motion Picture Editor, New York Herald Tribune
MOTION PICTURES
- A. D. Battey**
Statistician, National Safety Council
ACCIDENTS
- James V. Bennett, A.B., LL.B.**
Director, Bureau of Prisons, U.S. Department of Justice
PRISONS, PAROLE, AND CRIME
- John B. Blandford, Jr.**
Administrator, National Housing Agency
NATIONAL HOUSING AGENCY
- Jules I. Bogen, B.S., A.M., Ph.D.**
Editor, The Journal of Commerce; Professor of Finance, New York University
BANKS AND BANKING; BUSINESS REVIEW; FINANCIAL REVIEW; POSTWAR PLANNING; PUBLIC FINANCE; TAXATION
- Eugene MacD. Bonner**
Composer and Critic; Former Music Editor, The Outlook Magazine; Former Managing Editor, The Musical Record, Guest Critic, New York Herald Tribune
MUSIC
- Chester Bowles**
Administrator, Office of Price Administration
PRICE ADMINISTRATION, OFFICE OF
- Lyman J. Briggs, Ph.D., Sc.D., D.Eng., LL.D.**
Director, National Bureau of Standards, U.S. Department of Commerce
NATIONAL BUREAU OF STANDARDS
- A. S. Burack**
Editor, The Writer
MAGAZINES
- Vannevar Bush**
Director, Office of Scientific Research and Development
SCIENTIFIC RESEARCH AND DEVELOPMENT, OFFICE OF
- Walter G. Campbell, A.B., LL.B.**
Commissioner of Food and Drugs, Federal Security Agency
FOOD AND DRUG ADMINISTRATION
- Ralph W. Carey, A.B.**
New York Dramatic Correspondent, The Hartford Courant
THEATER
- Arthur P. Chew**
Special Writer, Office of Information, U.S. Department of Agriculture
AGRICULTURE
- Charles E. Clark, LL.D.**
Former Dean, Yale Law School; Judge, U.S. Circuit Court of Appeals, 2d Circuit
LAW
- Conway P. Coe, B.A., LL.B.**
Commissioner of Patents
PATENT OFFICE, U.S.
- Kenneth Colegrove, Ph.D.**
Professor of Political Science, Northwestern University; Author, American Citizens and Their Government; International Control of Aviation; Militarism in Japan; and The American Senate and World Peace
AERONAUTICS
- Fred H. Colvin**
Editor Emeritus, American Machinist
MACHINE BUILDING
- Alzada Comstock, Ph.D.**
Professor of Economics, Mount Holyoke College
CANADA (History)
- Leo T. Crowley**
Administrator, Foreign Economic Administration
ECONOMIC WARFARE, OFFICE OF; FOREIGN ECONOMIC ADMINISTRATION
- Joseph E. Davies**
Chairman, War Relief Control Board
WAR RELIEF CONTROL BOARD
- Elmer Davis**
Director, Office of War Information
WAR INFORMATION, OFFICE OF

Contributors to the New International Year Book—Continued

- Watson Davis**
Director, Science Service, Washington, D.C.
PHYSICS
- William H. Davis**
Chairman, National War Labor Board
NATIONAL WAR LABOR BOARD
- Newton B. Drury, B.L.**
Director, National Park Service
NATIONAL PARKS AND MONUMENTS
- John D. East**
Director of Research and Reports, Foreign Economic Administration
LEND-LEASE PROGRAM
- Joseph B. Eastman**
Director, Office of Defense Transportation
DEFENSE TRANSPORTATION, OFFICE OF
- Clarence B. Farrar, A.B., M.D., F.R.C.P.(C.)**
Professor of Psychiatry, University of Toronto; Director, Toronto Psychiatric Hospital; Editor, American Journal of Psychiatry
PSYCHIATRY
- W. W. Fetrow, B.S.A., Ph.D.**
Associate Chief, Cooperative Research and Service Division, Farm Credit Administration, U.S. Department of Agriculture
AGRICULTURAL COOPERATION
- John D. Fitz-Gerald, Ph.D., Litt.D.**
Professor of Romance Philology, University of Arizona
SPANISH-AMERICAN LITERATURES; SPANISH LITERATURE
- D. F. Fleming, Ph.D.**
Professor of Political Science, Vanderbilt University; Author, The United States and World Organization (1920-33); While America Slept, etc.
WORLD WAR
- Francis A. Flood**
Assistant to the War Food Administrator
WAR FOOD ADMINISTRATION
- James Lawrence Fly**
Chairman, Federal Communications Commission; Chairman, Board of War Communications
FEDERAL COMMUNICATIONS COMMISSION; WAR COMMUNICATIONS, BOARD OF
- John C. Forster**
Selection of photographs
- Ira N. Gabrielson**
Director, Fish and Wildlife Service, U.S. Department of the Interior
FISH AND WILDLIFE SERVICE
- Thomas V. Haney**
The New York Times
ARTICLES ON SPORTS
- Earl G. Harrison**
Commissioner of Immigration and Naturalization, U.S. Department of Justice
IMMIGRATION, EMIGRATION, AND NATURALIZATION
- Edward H. Hatton, M.D.**
Professor of Pathology and Bacteriology, Emeritus, Northwestern University Dental School; Past President and General Secretary, International Association for Dental Research
DENTISTRY
- Charles B. Henderson, LL.B., LL.M.**
Chairman of the Board, Reconstruction Finance Corporation
RECONSTRUCTION FINANCE CORPORATION
- G. Ross Henninger, B.S. (E.E.) Fellow A.I.E.E.**
Editor, American Institute of Electrical Engineers (on leave; Lieutenant Colonel, United States Army Air Forces)
COMMUNICATIONS, ELECTRICAL; ELECTRICAL INDUSTRIES; ELECTRIC LIGHT AND POWER; ILLUMINATION
- Lewis B. Hershey, A.B., B.S., B.Pd.**
Major General, United States Army; Director of Selective Service
SELECTIVE SERVICE SYSTEM
- Frank T. Hines, LL.D.**
Brigadier General, O.R.C., Administrator of Veterans' Affairs
VETERANS' ADMINISTRATION
- William E. Hooper**
Former Financial Editor, Railway Age
RAILWAYS
- J. Edgar Hoover, LL.B., LL.M., LL.D., Sc.D., D.C.I.**
Director, Federal Bureau of Investigation
FEDERAL BUREAU OF INVESTIGATION
- Chas. H. Hughes**
Former Technical Aide, United States Shipping Board; Author, 3rd edition Handbook of Ship Calculations, Construction, Operation
SHIPBUILDING; SHIPPING
- Harold L. Ickes, A.B., J.D., LL.D.**
United States Secretary of the Interior; Administrator, Petroleum Administration for War
PETROLEUM ADMINISTRATION FOR WAR
- W. R. Johnson, B.C.S., LL.B.**
Commissioner of Customs, U.S. Treasury Department
CUSTOMS, BUREAU OF
- Charles H. Judd, Ph.D., LL.D., Sc.D.**
Emeritus Professor of Education, The University of Chicago; Former Consultant of the War Department and Member of the Faculty of the School for Social Service
EDUCATION
- Ronald Stuart Kain, A.M.**
Associate Editor
Author, Europe: Versailles to Warsaw
FOREIGN COUNTRIES, COLONIES, AND DEPENDENCIES—ARGENTINA, AUSTRALIA, BRAZIL, CHILE, FRANCE, GERMANY, GREAT BRITAIN, INDIA, ITALY, PAN AMERICANISM, ETC.
- Frank Kane, B.S.S., LL.D.**
Publicity Director, Conference of Alcoholic Beverage Industries
LIQUOR INDUSTRY
- Charles F. Kettering**
Chairman, National Inventors Council, U.S. Department of Commerce
NATIONAL INVENTORS COUNCIL
- Grayson L. Kirk, Ph.D.**
Associate Professor of Government, Columbia University; Research Associate, Institute of International Studies, Yale University
UNITED NATIONS

Contributors to the New International Year Book—Continued

Emory S. Land

Rear Admiral, United States Navy (Ret.); United States Member, Combined Shipping Adjustment Board; Chairman, U.S. Maritime Commission; Administrator, War Shipping Administration
MARITIME COMMISSION, U.S.

Mervin L. Lane

Columnist; Insurance Broker, The Lane Agency; Author, Selling The Interview, Let There Be "Life"
INSURANCE

A. W. Lehman

Manager, The Cooperative Analysis of Broadcasting
RADIO PROGRAMS

Herbert H. Lehman

Former Governor, New York State; Director General, United Nations Relief and Rehabilitation Administration
RELIEF AND REHABILITATION

William M. Leiserson, Ph.D.

Chairman, National Mediation Board; Chairman, National Railway Labor Panel
LABOR CONDITIONS

Katharine F. Lenroot, LL.D.

Chief, Children's Bureau, U.S. Department of Labor
CHILDREN'S BUREAU; JUVENILE DELINQUENCY

H. E. Luedicke, Ph.D.

Business News Editor, The Journal of Commerce
BUILDING MATERIALS; CHEMICAL INDUSTRY; FOOD INDUSTRY; HIDES AND LEATHER; MACHINERY, INDUSTRIAL; PAPER AND PULP; TEXTILES

V. Jerauld McGill, A.B., Ph.D.

Assistant Professor, Hunter College, New York; A Book Editor, The Journal of Philosophy; An Editor, Philosophy and Phenomenological Research; Contributing Editor, Philosophical Abstracts
PHILOSOPHY

Paul V. McNutt, A.B., LL.B., LL.D.

Administrator, Federal Security Agency; Chairman, War Manpower Commission
FEDERAL SECURITY AGENCY; WAR MANPOWER COMMISSION

John B. Martin, A.B., Litt.B., J.D.

Acting Director, Office of Civilian Defense
CIVILIAN DEFENSE, OFFICE OF

Mabel F. Martin, Ph.D.

Former Director of Clinical Psychology, Richmond Professional Institute, Richmond, Va.; Assistant Professor of Physical Sciences, Peru State Teachers College, Nebraska
PSYCHOLOGY

Glenn E. Matthews, M.Sc., F.R.P.S., F.P.S.A.

Technical Editor, Kodak Research Laboratories, Rochester, New York
PHOTOGRAPHY

Leila Mechlin

Art Editor, The Evening Star, Washington, D.C.
ART

Harry A. Millis, Ph.D., LL.D.

Chairman, National Labor Relations Board
NATIONAL LABOR RELATIONS BOARD

Harry B. Mitchell

President, U.S. Civil Service Commission
CIVIL SERVICE COMMISSION, U.S.

Charles Sumner Morgan, B.S.

Engineer, National Fire Protection Association
FIRE PROTECTION

Dillion S. Myer

Director, War Relocation Authority
WAR RELOCATION AUTHORITY

Thomas B. Nolan

Acting Director, Geological Survey, U.S. Department of the Interior
GEOLOGICAL SURVEY, U.S.

Catharine Oglesby

President, Catharine Oglesby; Author, Business Opportunities for Women, Fashion Careers—American Style, Modern Primitive Arts
FASHION EVENTS

Thomas Parran, M.D.

Surgeon General, U.S. Public Health Service, Federal Security Agency
PUBLIC HEALTH SERVICE, U.S.

Mildred Othmer Peterson

Free lance writer, American Library Association
LIBRARY PROGRESS

Bert Pierce

Automobile Editor, New York Herald Tribune
MOTOR VEHICLES

Warren Lee Pierson, A.B., LL.B.

President, Export-Import Bank of Washington
EXPORT-IMPORT BANK OF WASHINGTON

Charles T. Post

Regional News and Technical Editor, The Iron Age
MINERALS AND METALS

William H. Potts, A.B.; M.D.

Assistant Professor of Clinical Medicine, Southwestern Medical Foundation School of Medicine
MEDICINE AND SURGERY

John B. Powell

Editor, China Weekly Review and China Press, Shanghai; Correspondent, American and British papers; interned by Japanese following Pearl Harbor, repatriated on Gripsholm, recuperating at Presbyterian Hospital, New York City.
CHINA; JAPAN; UNION OF SOVIET SOCIALIST REPUBLICS

Benfield Pressey, A.M.

Professor of English, Dartmouth College
LITERATURE, AMERICAN AND BRITISH

Byron Price, B.A., LL.D.

Director of Censorship
CENSORSHIP, OFFICE OF

Charles McD. Puckette

General Manager, The Chattanooga Times
NEWSPAPERS

Charles F. Reid, Ph.D.

Major, Air Corps, AAF School of Applied Tactics
TERRITORIES AND OUTLYING POSSESSIONS OF THE UNITED STATES

Carl H. Robinson

Chief, Cotton and Fiber Branch, Office of Distribution, War Food Administration
COTTON

Contributors to the New International Year Book—Continued

- Nelson A. Rockefeller**
Coordinator of Inter-American Affairs
 COORDINATOR OF INTER-AMERICAN AFFAIRS, OFFICE OF THE
- D. Kenneth Rose**
National Director, Planned Parenthood Federation of America, Inc.
 BIRTH CONTROL
- R. R. Sayers**
Director, Bureau of Mines, U.S. Department of the Interior
 MINES, BUREAU OF
- Albert Schinz, Ph.D., L.H.D., Litt.D.**
Professor Emeritus of Romance Languages and Literature, University of Pennsylvania
 FRENCH LITERATURE
- Michael J. Shortley**
Director, Office of Vocational Rehabilitation, Federal Security Agency
 VOCATIONAL REHABILITATION, OFFICE OF
- John R. Steelman**
Director of Conciliation, U.S. Department of Labor
 CONCILIATION SERVICE, U.S.
- Clifford Strock, M.E.**
Editor, Heating and Ventilating
 HEATING AND VENTILATING; REFRIGERATION AND AIR CONDITIONING
- John W. Studebaker**
U.S. Commissioner of Education
 EDUCATION, OFFICE OF
- Arthur Sweetser, A.B., A.M., LL.D.**
Former Member, League of Nations Secretariat, 1919-42
 LEAGUE OF NATIONS; WORLD COURT
- Norman Thomas, B.A., Litt.D.**
Chairman, Postwar World Council; Member, National Executive Committee of the Socialist Party; Author, America's Way Out, We Have a Future
 SOCIALISM
- Oliver Samuel Tonks, Ph.D.**
Professor of Art, Vassar College
 ARCHAEOLOGY
- E. E. Russell Tratman**
Former Associate Editor, Engineering News-Record
 CIVIL ENGINEERING TOPICS
- C. P. Trussell**
Staff Correspondent, Washington Bureau, The New York Times
 UNITED STATES
- Henry E. Vizetelly**
Assistant Editor
 FOREIGN COLONIES AND DEPENDENCIES—POLITICAL AND ECONOMIC HISTORY
- Russell R. Waesche**
Vice Admiral, United States Coast Guard; Commandant, Coast Guard, Department of Navy
 COAST GUARD
- Frank C. Walker, LL.B., LL.D.**
U.S. Postmaster General
 POST OFFICE DEPARTMENT
- L. Metcalfe Walling**
Administrator, Wage and Hour and Public Contract Divisions, U.S. Department of Labor
 WAGE AND HOUR DIVISION
- George L. Warren**
Executive Secretary, President's Advisory Committee on Political Refugees
 REFUGEES
- Allan Westcott, Ph.D.**
Senior Professor, Department of English and History, U.S. Naval Academy; Joint Author, A History of Sea Power, The United States Navy: A History
 NAVAL PROGRESS
- Walter White**
Secretary, National Association for the Advancement of Colored People
 NEGROES
- LeRoy Whitman**
Editor, Army and Navy Journal
 MILITARY PROGRESS
- John L. Whitmore**
Assistant Editor
 AGRICULTURAL CROPS; NECROLOGY; SCHOOLS; UNIVERSITIES AND COLLEGES; VITAL STATISTICS, ETC.
- Faith M. Williams, Ph.D.**
Chief, Cost of Living Division, Bureau of Labor Statistics, U.S. Department of Labor
 LIVING COSTS AND STANDARDS
- Herbert Wiltsee**
Director of Research (on leave, serving in the armed forces), The Council of State Governments
 ELECTIONS IN THE UNITED STATES; STATE LEGISLATION
- Richmond T. Zoch, A.M.**
Weather Bureau, U.S. Department of Commerce, Washington, D.C.
 ASTRONOMY; EARTHQUAKES; FLOODS; HURRICANES; METEOROLOGY

LIST OF ILLUSTRATIONS

	FACING PAGE
AERONAUTICS:	
Round-the-Clock Bombing of Objectives in Europe	8
New Products of American Designers: Mars, Liberator, Havoc, Waco CG-4A Glider, Com- mando, Helldiver	9
ANTHEM:	
New Anthem of the Soviet Union	32
Manuscript of Toscanini's Arrangement of "The Star Spangled Banner"	32
ARGENTINA:	
Disorder in Buenos Aires—President Pedro Pablo Ramírez	33
ART:	
"The Reverend Caspar Sibelius" by Hals—Memorial Group by Brenda Putnam—"Gregor Piatigorsky" by Wayman Adams	48
"Serviced and Ready" by Lawrence Beall Smith—"Tallying the Convoy" by Anton Otto Fischer—"Marrakech, Morocco" by Winston Churchill	49
CHINA:	
The Recapture of Changteh	128
Madame Chiang Addressing the U.S. House of Representatives	129
Reconstruction in Kunming—Distribution of Relief in Changteh	129
GERMANY:	
Mussolini Greeted by Hitler upon Arriving in German Territory	240
The Funeral of Boris, Bulgarian Monarch	240
Revolt Against the Axis in Yugoslavia	241
INDIA:	
Field Marshal Viscount Archibald Wavell, Viceroy of India	280
Famine in Bengal and Other Food-Importing Areas	280
ITALY:	
The Signing of the Italian Armistice	281
American Coast Guardsmen Making Friends with Italians	281
A Courtroom Scene under the Allied Military Government	281
Amphibious and Mountain Operations in Italy	296
Invasion of the Italian Mainland	297
JAPAN:	
Reports of Japanese Atrocities Are Proved	304
JUVENILE DELINQUENCY:	
The Problem of Delinquency as Depicted in March of Time's <i>Youth in Crisis</i>	305
MACHINE BUILDING:	
Welded Structures—Use of Steel Castings instead of Forgings—Parts Made from Powdered Metal	346
MAGAZINES:	
A Group of Magazines on Military Subjects	352
"Pony" Editions of <i>The New Yorker</i> and <i>Time</i>	352
MEDICINE:	
The Inevitable Price of War: American Casualties at Tarawa and Buna—A Military Funeral in New Guinea	360
Resources Marshaled to Reduce the Toll: Ambulance Train—Field Hospital—Ambulance Plane—Transfer of Wounded	361
MILITARY PROGRESS:	
Employment of Air Power Against Enemy Supply: Breaching of the Moehne Dam	353
The Supreme Command Named to Direct the Invasion of Europe—Nazis Preparing to De- fend the Atlantic Wall	376
New Small Arms for U.S. Soldiers	377
MINERALS:	
Continuous Rolling Mill Production of Aluminum Strip	347
Geneva Steel Works, Provo, Utah, Largest Unit in the Steel Expansion Program	347
MOTION PICTURES:	
For Whom the Bell Tolls—Air Force—Watch on the Rhine	384
The Motion Picture as a Medium for Training in War Production	385

MUSIC:	
Metropolitan Opera Star Marjorie Lawrence—Artur Rodzinski, Director of the New York Philharmonic	433
Spotlight on Ballet: Dim Lustre—Romeo and Juliet	433
NAVAL PROGRESS:	
Types of Invasion Craft: LST—A 36-Footer—LCI—The “Duck”—The “Alligator”	404
Types of Patrol and Escort Craft: The Destroyer Escort—SC Sub-Chaser—A District Patrol Vessel—PC Boat—Non-Rigid Airships L-2 and K-2	405
NEGROES:	
Flare-up of Race Violence in Harlem and Detroit.	432
PHOTOGRAPHY:	
High Precision Aiming Circles Manufactured by a Photographic Concern	488
Automatic Processing Machine in the U.S. Army N-3 Photo Trailer	488
U.S. Army Portable Darkroom Outfit	488
PLASTICS:	
Vinylite—Bakelite—Plywood Trainer Made by the Duramold Process—Plexiglas—Micarta—Plastic Helmets	489
RAILWAYS:	
Wreck of the Congressional Limited in Philadelphia—Freight Train Derailed near Highland, N.Y.	536
THEATER:	
Winged Victory—Paul Robeson as Othello—The Voice of the Turtle	537
SHIPBUILDING:	
Launching and Outfitting of a Liberty Ship—Comparison of Liberty and Victory Models	568
SHIPPING:	
Problems of Shipping to Distant Battlefronts	569
UNION OF SOVIET SOCIALIST REPUBLICS:	
Beginning of the Long German Retreat from Russia	656
The Task of Rebuilding Devastated Homes and Industries	657
UNITED NATIONS:	
Leaders in a Series of Historic Meetings: Casablanca, Cairo, Quebec, Tehran	664
United Nations Food Conference at Hot Springs	665
First Session of the UNRRA at Atlantic City	665
WORLD WAR:	
Allies Drive the Axis from North Africa	736
Landing Operations on Kiska and Attu	737
Operations on New Guinea	744
The Landing on Bougainville	744-745
Air Attacks on Japanese Forces at Rabaul	744-745
The Capture of Tarawa	744-745
The Capture of Makin Atoll.	744-745
The Landing at Cape Gloucester, New Britain	745

MAPS

	PAGE
AERONAUTICS:	
International Air Routes	14
BRAZIL:	
Brazil's New Territories.	77
CHINA:	
China After Six Years of War	125
PORTUGAL:	
British Naval and Air Bases in the Azores	499
THAILAND:	
Thailand's Territorial Acquisitions.	636
WORLD WAR:	
Alignment of the Nations	730
Red Army Gains from Nov. 10, 1942, to Nov. 5, 1943	733
Russian Advance during July 12-Dec. 31, 1943	735
The Tunisian Campaign.	736
Sicilian Campaign	738
Italian Front at the Close of 1943	740
Attu Island Campaign	742
Admiral Halsey's Advance in the Solomons	743
Battle Lines in the Southwest Pacific	744
Limits of Adm. Lord Louis Mountbatten's East Asia Command	746
Allied Assaults on Hitler's European Fortress.	750
Fifteen Military Highlights of the Year	End Papers

CHARTS AND DIAGRAMS

AERONAUTICS:	
Bombs on Axis Europe—Tonnage Dropped in Four Years of War	4
U.S. Military Plane Production, Airframe Weight and Numbers	6
AGRICULTURE:	
The Wartime Rise in Farm Prices and Farm Income	22
BANKS AND BANKING:	
Commercial Bank Holdings of Government Securities by Types	55
BUSINESS REVIEW:	
Individual Incomes—Total Payments, Taxes, Savings, and Consumer Expenditures	91
Munitions Output, 1942-43, and Program, 1944—Total	92-93
Small Arms, Artillery, Aircraft, Ground Army Ordnance and Signal	92
Tanks, Trucks, Navy Ships, Maritime Commission	93
Increase in Profits and Tax Load	94
MILITARY PROGRESS:	
Organization of the U.S. Army.	374
Growth of the Army, January, 1941, to June, 1943	377
POSTWAR PLANNING:	
The Postwar Employment Problem in the United States	502
PUBLIC FINANCE:	
U.S. Treasury Receipts and Expenditures, 1939-1943	521
Third War Loan Drive by Classes of Investors	523
RUBBER:	
Synthetic Rubber Program, United States and Canada, Showing Rated Annual Capacities	551
UNITED STATES:	
America's War Effort, 1942-43—War Production, Food Production, Consumers' Expenditures, Armed Forces, Lend-Lease, Taxes per Capita	667
American Manpower, 1941-43—Armed Forces, Essential Industries, Agriculture, Less Essential Civilian Work, Unemployed	670
United States Government—Executive Branch	672-673
WORLD WAR:	
The Sinking of the <i>Scharnhorst</i>	748

CHRONOLOGY, 1943

- Jan. 2**—Russians captured Velikiye Luki on the central front.
- Jan. 3**—Allies completed conquest of Buna in New Guinea.
- Jan. 7**—Pleasure driving ban was imposed in 17 eastern States by OPA; lifted Sept. 1.
- Jan. 14-21**—Roosevelt and Churchill conferred at Casablanca, French Morocco.
- Jan. 16**—Iraq declared war against the Axis. Berlin was raided with 4-ton bombs.
- Jan. 18**—Russians broke the siege of Leningrad, capturing Schluesselburg.
- Jan. 20**—Chile broke off diplomatic relations with the Axis.
- Jan. 23**—British captured Tripoli. Japanese were overwhelmed in the Sananda sector, New Guinea.
- Jan. 31**—German generals surrendered at Stalin-grad. Russians captured Maikop.
- Feb. 6**—Russians drove to the Black Sea, cutting off Germans in Caucasus.
- Feb. 7**—Shoes were rationed at three pairs a year in the United States.
- Feb. 8**—Russians captured Kursk; also, by Feb. 16, Belgorod, Rostov, Kharkov.
- Feb. 9**—Japanese abandoned Guadalcanal. Roosevelt decreed 48-hour week in labor shortage areas.
- Feb. 14**—Rommel opened offensive in Tunisia.
- Feb. 18**—Madame Chiang Kai-shek addressed the U.S. Congress, urging aid to China.
- Feb. 21-25**—The Battle of Kasserine Pass in Tunisia was won by the Allies.
- Feb. 24**—Round-the-clock bombing of Germany began with Wilhelmshaven attack.
- Mar. 1**—Canned goods were rationed in the United States.
- Mar. 3**—Russians captured Rzhev. Gandhi ended a 3-week fast against the British.
- Mar. 3-5**—Allied planes destroyed a Japanese convoy in the Bismarck Sea.
- Mar. 14**—Germans recaptured Kharkov in counter-offensive on Kharkov-Dnieper-Donets front.
- Mar. 16**—Allies launched a pincer drive against Rommel in southern Tunisia.
- Mar. 25**—Chester C. Davis was named U.S. Food Administrator as shortages spread.
- Mar. 28**—British broke Rommel's Mareth line; captured port of Gabes, Mar. 30.
- Mar. 29**—Rationing of meats, fats, and cheese went into effect in the United States.
- Apr. 4**—Three American officers escaped to Australia from the Philippines with reports of Japanese atrocities.
- Apr. 5**—Allies launched air offensive against Mediterranean bases; bombed Renault works, Paris.
- Apr. 7**—Bolivia declared war against the Axis.
- Apr. 8**—President Roosevelt issued a "hold-the-line" order against inflation.
- Apr. 17**—War Manpower Commission froze 27,000,000 essential workers in their jobs.
- Apr. 21**—U.S. State Department protested Japanese execution of Americans captured in Tokyo raid.
- Apr. 26**—Russia severed relations with Polish government-in-exile.
- May 1**—U.S. government seized coal mines as 530,000 miners defied WLB.
- May 4**—Attack on Dortmund opened aerial blitz against the Ruhr industries.
- May 7**—Allies captured Tunis and Bizerte. OPA ordered price roll-backs to be effected by subsidies.
- May 11**—Churchill arrived in Washington for conferences.
- May 12**—Organized Axis resistance in Tunisia ended.
- May 14**—Australian hospital ship *Centaur* was torpedoed off Queensland with loss of 300.
- May 16**—R.A.F. breached Ruhr Dams. War Meat Board established to fight black markets.
- May 18**—United Nations Food Conference opened at Hot Springs, Va.
- May 27**—Office of War Mobilization was established; Byrnes became Director.
- May 31**—Americans recaptured Attu after landings on May 11.
- June 3**—French Committee of National Liberation was set up in Algiers.
- June 4**—Argentine government was overthrown with Ramirez replacing Castillo.
- June 9**—Current Tax Payment Act was signed, adopting a pay-as-you-go plan.
- June 12**—King George VI arrived in North Africa for a tour.
- June 21**—Race riots broke out in Detroit. Coal strike resumed on portal-to-portal issue.
- June 25**—Congress passed the Smith-Connally strike control act over presidential veto.
- June 26**—The largest naval appropriation bill in history provided \$27,637,226,198.
- June 30**—Americans landed on Rendova and New Georgia Islands.
- July 1**—Military Establishment Act provided \$59,034,839,673 for the Army.
- July 2**—Roosevelt vetoed Congressional ban on subsidies.
- July 10**—Allies launched an amphibious invasion of Sicily.
- July 12**—Russians launched their great summer offensive.
- July 15**—Roosevelt abolished BEW following Wallace-Jones controversy.
- July 19**—Rome was bombed; second attack occurred on Aug. 13.
- July 23**—Americans captured Palermo.
- July 24-Aug. 2**—Hamburg was devastated by saturation air attacks.
- July 25**—Mussolini was ousted; succeeded by Marshal Pietro Badoglio.
- Aug. 1**—U.S. raided Ploesti oil refineries in Rumania. Rioting in Harlem caused five deaths.
- Aug. 5**—United Nations scored major victories on three fronts, capturing Orel and Belgorod in Russia, Catania in Sicily, Munda airfield in New Georgia.
- Aug. 9**—German-Italian conference at Verona was concluded.

- Aug. 11-24**—British-American war conference was held at Quebec.
- Aug. 14**—Americans raided Messerschmitt plant near Vienna.
- Aug. 15**—Americans occupied Kiska in the Aleutians.
- Aug. 17**—Allies captured Messina, completing 38-day campaign for Sicily.
- Aug. 23**—Russians captured Kharkov.
- Aug. 24**—Heinrich Himmler was appointed German Minister of Interior.
- Aug. 25**—Japanese abandoned New Georgia. Mountbatten became Allied Commander in Southeast Asia.
- Aug. 28**—King Boris of Bulgaria died in mysterious circumstances.
- Aug. 29**—Germany declared martial law in Denmark; interned royal family.
- Sept. 3**—British landed in Calabria on the "toe" of the Italian mainland.
- Sept. 6**—Railway wreck near Philadelphia cost 78 lives.
- Sept. 7**—Conference of Republican leaders approved postwar international collaboration.
- Sept. 8**—Italy surrendered unconditionally according to a secret armistice of Sept. 3. Russians recaptured Stalino, freeing Donets Basin. Third War Loan Drive opened.
- Sept. 9**—Allies landed south of Naples, waging Battle of Salerno, Sept. 9-16.
- Sept. 11**—Bulk of Italian navy escaped to Allied ports; *Roma* sunk.
- Sept. 12**—British established Taranto-Brindisi line, cutting off "heel" of Italy.
- Sept. 13**—Japanese lost Salamaua base in New Guinea; also, Lae, Sept. 18.
- Sept. 15**—Mussolini was proclaimed head of a German-sponsored government in Italy.
- Sept. 16**—Russians captured Novorossiisk; also, within ten days, Bryansk, Poltava, Smolensk.
- Sept. 19**—Submarine-convoy battle cost ten Allied vessels, ending four-month lull in the Battle of the Atlantic. Germans driven from Sardinia.
- Sept. 22**—German battleship *Tirpitz* was immobilized by two-man submarine.
- Sept. 25**—Stettinius replaced Welles as Under-Secretary of State.
- Sept. 28**—Allies captured Foggia; also, Sept. 29, Pompeii.
- Oct. 1**—Allied Fifth Army occupied Naples.
- Oct. 3**—British made an amphibious landing at Termoli, Italy.
- Oct. 4**—Germans were driven from Corsica. Australians captured Finschhafen, New Guinea.
- Oct. 7**—Russians crossed the middle Dnieper. German delayed action mine in Naples killed 100.
- Oct. 7-8**—U.S. Senate held secret sessions on report of senators touring battle fronts.
- Oct. 8**—Fifth Army captured Capua; also, Oct. 9, Caserta.
- Oct. 12**—Allies raided Rabaul, New Britain; other heavy attacks in November.
- Oct. 13**—Italy declared war on Nazi Germany.
- Oct. 14**—Raid on Schweinfurt ball-bearing plants cost 60 Flying Fortresses and 593 men.
- Oct. 15-16**—Allies crossed the Volturno River, breaking the Volturno-Calore line.
- Oct. 17**—Chicago opened its first subway.
- Oct. 19-30**—Hull, Eden, and Molotov attended three-power conference in Moscow.
- Oct. 26**—Foreign Economic Administration was formed under Crowley.
- Oct. 27**—Allies occupied Mono and Stirling Islands.
- Nov. 1**—Americans landed on Bougainville. Russians captured Perekop, trapping Germans in Crimea. U.S. again took over coal mines.
- Nov. 2**—Elections resulted in Republican gains.
- Nov. 3**—Allies enveloped Mt. Croce; captured Isernia, Nov. 4.
- Nov. 5**—U.S. Senate passed a resolution favoring an international postwar peace organization. U.S. Army took over Tule Lake Japanese Segregation Center after disturbances.
- Nov. 6**—Russians captured Kiev.
- Nov. 9**—United Nations Relief and Rehabilitation Administration was established by 44 nations.
- Nov. 13-19**—Zhitomir changed hands twice in Battle of Kiev Bulge.
- Nov. 18**—R.A.F. launched air blitz on Berlin; 8 major attacks by year end.
- Nov. 21**—Americans invaded Gilbert Islands, completing capture in 4 days.
- Nov. 22-25**—Roosevelt, Churchill, and Chiang met in Cairo.
- Nov. 25**—Allies crossed the Sangro River, breaching German winter line.
- Nov. 26**—Russians captured Gomel and launched an offensive to the north. Australians captured Sattleberg, New Guinea, and (Nov. 29) Bonga.
- Nov. 28-Dec. 1**—Roosevelt, Churchill, and Stalin met in Tehran.
- Nov. 29**—Colombia declared war on Germany.
- Dec. 8**—Allies won the major heights in the Camino Maggiore area.
- Dec. 9**—Chinese recaptured Changteh, winning a major victory in rice-bowl area.
- Dec. 10**—Pre-Pearl Harbor fathers were put at bottom of nationwide draft pool.
- Dec. 14**—Russians captured Cherkassy on the middle Dnieper; attacked below Nevel (Dec. 15).
- Dec. 16**—Sixth U.S. Army invaded New Britain. Train wreck near Lumberton, N.C., cost 73 lives.
- Dec. 20**—President Penaranda of Bolivia was ousted by military coup. Americans captured San Pietro Infine in Italy.
- Dec. 24**—Eisenhower was appointed to lead the invasion of Europe. Size of bombing raids rose to 3,000 planes.
- Dec. 25**—U.S. Marines attacked Cape Gloucester, New Britain, capturing airdrome, Dec. 30.
- Dec. 26**—British sank the German battleship *Scharnhorst* off Norway.
- Dec. 27**—President ordered the Army to take over railways to prevent strike.
- Dec. 28**—British captured Ortona, Italy.
- Dec. 31**—Russians captured Zhitomir in a 168-mile break-through in the Kiev bulge.

For a War Chronology, 1939-42, see pages 726-9

THE NEW INTERNATIONAL YEAR BOOK 1943

AAA. Agricultural Adjustment Agency. See AGRICULTURE, U.S. DEPARTMENT OF.

AAF. See AERONAUTICS.

ABEMAMA. See GILBERT AND ELLICE ISLANDS.

ABRASIVES. See CHEMISTRY.

ABSENTEEISM. See LABOR; also BIRTH CONTROL.

ABYSSINIA. See ETHIOPIA.

ACADEMIES, Learned. See SPANISH-AMERICAN and SPANISH LITERATURE, and the articles which follow.

ACADEMY OF ARTS, Royal. The Royal Academy of Arts, founded by King George III in 1768, is maintained, through the public support of its Exhibitions, for the promotion of the Fine Arts. The Membership consists of forty Academicians and thirty Associates, elected by ballot by the Members from among the most distinguished painters, sculptors, architects, and engravers practising in England.

During January and February, 1943, the Royal Academy, in collaboration with the other principal Art Societies of Great Britain, held a United Artists' Exhibition of works to be sold in aid of H.R.H. The Duke of Gloucester's Red Cross and St. John Fund. From May 1 to August 7 it held its Summer Exhibition (the 175th) as usual. From September 3 to October 10 it lent the whole of its Galleries for an Exhibition of War Photographs (*Daily Express*), and during November for five concurrent Exhibitions: The London Group (paintings, drawings, and sculpture); London County Council County of London Plan; Paintings by Firemen Artists; Royal Society of Portrait Painters (paintings and drawings); Royal Institute of Painters in Water Colours. The Officers of the Royal Academy for 1943 are as follows: President and Trustee, Sir Edwin L. Lutyens, O.M., K.C.I.E., P.R.A.; Keeper, G. F. Kelly, R.A.; Treasurer and Trustee, E. V. Harris, O.B.E., R.A.; Trustees, Sir William Reid Dick, K.C.V.O., R.A., and W. R. Flint, R.A.; Secretary, Sir Walter R. M. Lamb, K.C.V.O.

ACADEMY OF ARTS AND LETTERS, American. A society founded in 1904 by members of the National Institute of Arts and Letters. Membership is limited to 50, vacancies being filled by elections from the membership of the Institute.

On May 12, 1943, a Special Meeting of the Academy was held, followed by a Public Ceremony given jointly with the National Institute of Arts and Letters at which new members of the Institute were inducted, ten \$1,000 "Arts and Letters" Grants given, and medals of both institutions awarded. An exhibition of the works of Carl Milles, sculptor, recipient of the Academy's "Award of Merit Medal," together with works by newly elected Institute members and Grantees in Art,

Literature, and Music, was opened on the same day in the Art Gallery and Museum, and continued through June 23. On October 22 the Annual Meeting of the Academy was held at the Academy building. The Exhibition in the Art Gallery and Museum was reopened and will continue for an indefinite period. This is free to the public.

The membership as of November, 1943, consisted of the following in the order of their election: Bliss Perry, Nicholas Murray Butler, Herbert Adams, Archer Milton Huntington, Newton Booth Tarkington, Charles Dana Gibson, Royal Cortissoz, Wilbur L. Cross, Hermon A. MacNeil, James Earle Fraser, Robert Frost, James Truslow Adams, Adolph Alexander Weinman, Walter Damrosch, Anna Hyatt Huntington, Paul Manship, Eugene O'Neill, Henry Dwight Sedgwick, Walter Lippmann, M. A. de Wolfe Howe, Frank Jewett Mather, Jr., Stewart Edward White, Deems Taylor, Van Wyck Brooks, Herbert Putnam, William Adams Delano, Charles Warren, Bernard Berenson, Chauncey Brewster Tinker, Albert Spalding, Sinclair Lewis, Willa Cather, Ellen Glasgow, Thornton Wilder, Henry O. Taylor, Ralph Adams Cram, Edna St. Vincent Millay, Carl Sandburg, Agnes Repplier, Charles Hopkinson, Paul Philippe Cret, Eugene Speicher, Henry R. Shepley, John Alden Carpenter, John Sloan, Barry Faulkner, Edward W. Redfield, Gifford Beal, Frederick Law Olmsted, Ernest Bloch, and John Marin.

Officers elected in 1943 were: President, Walter Damrosch; Chancellor and Treasurer, James Truslow Adams; Secretary, Van Wyck Brooks; Directors: William Adams Delano, Charles Dana Gibson, Sinclair Lewis, Paul Manship, Deems Taylor, and Chauncey Brewster Tinker. Administrative offices are at 633 West 155 St., New York City.

ACADEMY OF DESIGN, National. An organization of American artists, established in New York in 1825 and incorporated in 1828 for the purpose of "cultivation and extension of the arts of design." In 1906 the Society of American Artists merged with the Academy.

The Academy maintains annual Exhibitions of painting, sculpture, and engraving, to which all artists may contribute, subject to jury. At these exhibitions various prizes are awarded. It conducts an Art School at which no tuition is charged. It also administers the Henry W. Ranger Fund for the purchase of paintings to be presented to various museums. Its membership is limited to professional painters, sculptors, workers in the graphic arts, and architects.

The Academicians elected at the annual meeting in April, 1943, were: Painters—John Steuart Curry,

Jay Connaway, Gladys Rockmore Davis, Louis Kronberg, Albert Herter, Reginald Marsh, Everett Shinn, W. Lester Stevens. Sculptors—Donald DeLue, Leo Lentelli. Architects—Henry R. Shepley. Graphic Arts—John Winkler.

The Associates elected in April, 1943, were: Painters—Percy Albee, Louis Ritman, Floyd Gahman, Douglas Gorsline, Hilde B. Kayn, Giovanni Martino, William Meyerowitz, Clarence Millet, Dana Pond. Sculptors—Peter Dalton, Donald Hord. Graphic Arts—E. Hubert Deines, Lawrence Kupperman, Martin Petersen. Architects—William Van Allen, Lawrence Grant White, Arthur Brown, Jr.

Elected Officers are: Hobart Nichols, President; John Taylor Arms, First Vice-President; Paul H. Manship, Second Vice-President; Georg Lober, Corresponding Secretary; J. Scott Williams, Assistant Corresponding Secretary; Raymond P. R. Neilson, Recording Secretary; Frederick Ballard Williams, Treasurer; Charles Keck, Assistant Treasurer. The Galleries and Executive Offices are located at 1083 Fifth Avenue, New York.

ACADEMY OF SCIENCES, National. A body of scientists incorporated by Act of Congress in 1863 for the purpose of investigating and reporting upon scientific subjects whenever called upon to do so by any department of the U.S. Government, with the proviso that the Academy shall receive no compensation for services to the Government but may be reimbursed for the actual expenses incurred in making such investigations and reports. Membership in the Academy is limited to 450 active members, who must be citizens of the United States; and 50 foreign associates. Names voted upon in the election of new members are nominated by the Section covering the branch of research in which the individual is working, upon a two-thirds vote of that Section. There are no applications for membership, as the proposed names originate upon suggestion by the existing membership.

At the present time the Academy is engaged to a large extent on Government problems concerned with scientific matters related to the war. These reports are confidential and are not published by the Academy.

The Academy meets twice a year. The Annual Meeting is held in Washington on the fourth Monday of April, and the Autumn Meeting is generally held in the East and West in alternate years. For the duration of the war, both meetings are held in Washington and are confined to business sessions for members only. At the 1943 Annual Meeting the following medals were presented: Henry Draper Medal for 1942, to Ira Sprague Bowen; Agassiz Medal for 1942 with accompanying honorarium of \$300, to Columbus O'Donnell Iselin, II; Daniel Giraud Elliot Medals with accompanying honoraria of \$200, for 1935 to Edwin H. Colbert, for 1936 to Robert Cushman Murphy; John J. Carty Medal and accompanying Award, \$4,000, to Edwin Grant Conklin.

Twenty-six new members were elected at the 1943 Annual Meeting: Leason Heberling Adams, Abraham Adrian Albert, Jesse Wakefield Beams, Arthur Francis Buddington, Leonard Carmichael, William Henry Chandler, Edwin Joseph Cohn, John Nathaniel Couch, Theodosius Dobzhansky, Lee Alvin DuBridge, Leslie Clarence Dunn, Wallace Osgood Fenn, Paul Darwin Foote, Louis Plack Hammett, William Vermillon Houston, Walter Pearson Kelley, Warfield Theobald Longcope, Eli Kennerly Marshall, Jr., Leonor Michaelis, William Albert Noyes, Jr., Oswald Hope Robertson, Carl-Gustaf Arvid Rossby, Calvin Perry Stone, Charles

Vincent Taylor, Hubert Bradford Vickery, and Vladimir Kosma Zworykin. Six new foreign associates were elected at the same time: Alfonso Caso, Mexico; Sir Harold Spencer Jones, England; Richard Vynne Southwell, England; Charles Edward Spearman, England; Sir D'Arcy Wentworth Thompson, Scotland; Hendrik Johannes van der Bijl, South Africa.

The Academy publishes an *Annual Report*, scientific *Memoirs*, *Biographical Memoirs* of deceased members, and monthly *Proceedings* devoted to condensed reports of recent scientific discoveries. The Academy building, 2101 Constitution Avenue, Washington, is closed to the public for the duration of the war.

ACCIDENTS. Accidental deaths in 1943 totaled approximately 94,500, a decrease of 1,400, or about 1½ per cent, from the 1942 total of 95,889, according to National Safety Council estimates. Nonfatal injuries, on the other hand, are estimated to have increased 3 per cent from 9,400,000 to 9,700,000.

Direct costs—including wage loss, medical expense, overhead costs of insurance, and property damage in motor vehicle accidents and fires—declined from \$3,900,000,000 to \$3,700,000,000. Indirect costs of occupational accidents—such as interference with production, damaged materials and machinery, time lost by workers other than the injured—amounted to about \$1,300,000,000, which carried total costs up to more than \$5,000,000,000.

The following table shows the 1942 and 1943 death totals for the principal classes of accidents.

	1943	1942	Change
Total.....	94,500	95,889	-1½%
Motor vehicle.....	23,300	28,309	-18%
Public (ex. mot. veh.)—civilian.....	15,500	15,000	+ 3%
Home—civilian.....	33,000	31,500	+ 5%
Occupational—civilian.....	18,000	18,500	- 3%
Military personnel.....	9,500	6,600	+44%

Note: The motor vehicle death totals include some deaths also included in occupational, home and military personnel. The 1942 all-accident and motor vehicle totals are U.S. Census Bureau figures. All others are National Safety Council estimates.

The 1943 death rate per 100,000 population was approximately 70. Comparable rates are: 1940, 73.4; 1930, 80.5; 1920, 71.2; 1910, 84.4.

Heart disease, cancer, cerebral hemorrhage, and nephritis, were the only causes of death exceeding accidents in 1942, according to U.S. Census Bureau data. Preliminary information indicates that accidents ranked fifth in 1943, also. Among males, alone, accidents are the third most important cause of death, being exceeded by heart disease and cancer. From age 2 to 28, both sexes, accidents caused more deaths than any disease in 1941. Among males they were first from age 2 to 38.

The 1943 accidental deaths were distributed by age about as follows: 0-4 years, 8,050; 5-14 years, 6,850; 15-24 years, 12,550; 25-44 years, 19,400; 45-64 years, 20,100; 65 years and older 27,550. Probably more significant are the death rates per 100,000 population: 0-4 years, 65; 5-14 years, 32; 15-24 years, 54; 25-44 years, 49; 45-64 years, 73; 65 years and older, 276. The rate for 5-14 years will be seen to be only one-ninth of the 65 and older rate. In most recent years the rate for elderly people rose, while that for school children decreased, although in 1940, 1941, and 1943 there was a small reversal of this trend.

Deaths from motor vehicle accidents continued to decrease in 1943, but the reduction was not as great as the drop from 1941 to 1942. Fatality totals for the three years were: 1941, 39,969; 1942, 28,309; 1943, 23,330.

Vehicle mileage, as a result of nation-wide gas rationing throughout 1943, showed an even greater drop from 1942 to 1943 than from 1941 to 1942. The death rate based on vehicle mileage showed a small rise in 1943. The rates per 100,000,000 vehicle miles were: 1941, 12.7; 1942, 10.9; 1943, 11.0.

Rural accident deaths in 1943 totaled approximately 12,800, or 23 per cent less than in 1942. Deaths from urban accidents numbered about 10,500, a decline of only 10 per cent. Compared to 1941 the rural total represents a drop of 50 per cent, the urban total a decrease of 26 per cent.

Pedestrian deaths numbered approximately 9,600, or 10 per cent less than in 1942. Nonpedestrian deaths totaled 13,700, a decrease of 22 per cent.

Although the decrease in deaths was relatively large, children failed to share in it. Fatalities of children under 5 increased from 1,069 to 1,150, and those of the 5-14 age group went up from 1,991 to 2,150. In the 15 to 24 year group deaths dropped 30 per cent to 4,150.

Deaths of persons 25 to 44 years totaled approximately 6,050, a 22 per cent decrease from the 1942 total. In the 45-64 year group the total went down 17 per cent to 6,050. Persons 65 years and over recorded a 13 per cent decline to 3,750.

In addition to the deaths, about 800,000 persons received nonfatal injuries in motor vehicle accidents during 1943, or one out of each 168 persons in the United States. Wage loss, medical expense and overhead costs of insurance amounted to about \$650,000,000, and property damage to approximately \$550,000,000—a grand total of \$1,200,000,000.

The 1943 death toll from public (except motor vehicle) accidents was approximately 15,500, an increase of about 500 from the 1942 total of 15,000. Preliminary information indicates some increase in deaths from transportation accidents, falls, burns, and drownings, but a decrease in firearms accidents. There were three serious railroad accidents, with total deaths between 150 and 200. However, no disaster occurred similar to the 1942 Boston night club fire.

The increase was confined to children under 15 and persons 45 years and over. The fact that there was no increase for 15 to 44 years is probably accounted for by the large number of men going into the armed forces.

Injuries numbered approximately 1,900,000. The cost of fatal and nonfatal accidents is estimated at \$400,000,000 for wage loss, medical expense, and overhead costs of insurance.

There were approximately 33,000 deaths from home accidents in 1943, an increase of 5 per cent from the 1942 total of 31,500. Injuries numbered about 4,950,000. Wage loss, medical expense, and overhead costs of insurance totaled \$600,000,000.

The largest increases in deaths were from asphyxiation, suffocation, burns, and falls. Poisonings and firearms accidents decreased slightly, while other types of fatal accidents showed little change from 1942.

All of the rise in deaths occurred among children under 15 years and adults 45 years and older. There was a decrease in the number of fatalities of persons 15 to 44 years old, probably due in part to men going into the armed forces and in part to the fact that a great many women are now working who formerly spent much of their time at home.

Occupational Accidents. The decrease in deaths from occupational accidents from 18,500 in 1942 to 18,000 in 1943 was particularly notable because total exposure, as indicated by employment and

hours worked per week, was about 3½ per cent greater than in 1942. Nonfatal injuries, however, continued to increase, reaching a total of about 1,850,000, or 6 per cent more than in 1942.

Direct costs of occupational accidents—wage loss, medical expense, and overhead costs of insurance—amounted to \$1,000,000,000. Indirect costs, such as time lost by supervisors and workers other than the injured, interrupted production schedules and damaged machinery, are estimated at about \$1,300,000,000, which places total costs for these accidents at \$2,300,000,000.

Two coal mining explosions occurred during 1943 killing a total of 100 workers. Apart from these accidents, however, there were no disasters in 1943 which resulted in the death of as many as 20 workers.

The figures above measure the size of the occupational accident problem in 1943, but they do not indicate the full extent to which accidents may interfere with production. In these days of manpower shortage, off-the-job accidents which keep employees away from work, or lower their efficiency while at work, must be counted as a factor in restricting output. The 1943 toll resulting from off-the-job accidents was 23,500 workers killed and 2,150,000 injured. The total loss from accidents to workers, on and off the job, thus was 41,500 deaths and nearly 4,000,000 injuries resulting in lost time beyond the day of the accident.

For accident fatalities and rates by States, see **VITAL STATISTICS**. For accident policies, see **INSURANCE**. See also **AERONAUTICS**; **RAILWAYS**, etc., and the topics listed under **INDUSTRIAL HEALTH AND SAFETY**.

A. D. BATTEY.

ADEN. See under **ARABIA**.

ADMIRALTY ISLANDS. See **NEW GUINEA, TERR. OF**. **ADVANCED STUDY.** Institute for. See 1942 and 1943 **YEAR BOOKS**.

ADVENT MOVEMENT. A religious movement which originated in America with William Miller (1782-1849), who believed in the imminent, personal second coming of Christ. There are six Adventist bodies in the United States, the largest being the Seventh-day Adventist Denomination, formally organized in 1860, which observes Saturday as the Sabbath of the Scriptures. Headquarters, Takoma Park, Washington, D.C. For statistics, see **RELIGIOUS ORGANIZATIONS**.

ADVERTISING. See **COORDINATOR OF INTER-AMERICAN AFFAIRS**; **FASHION EVENTS**; **MAGAZINES**; **NEWSPAPERS**; **RADIO PROGRAMS**. Compare **PROPAGANDA**. **ADVISORY COUNCIL FOR ITALY.** See **GREAT BRITAIN AND ITALY**, under *History*; **UNITED NATIONS** under *Moscow Conference*.

AEGEAN ISLANDS, Italian. See **ITALIAN AEGEAN ISLANDS**; **WORLD WAR**.

AERIAL PHOTOGRAPHIC LABORATORY. See **PHOTOGRAPHY**.

AERONAUTICS. Military necessities dominated aviation in the year 1943, although blueprints for air traffic in the postwar era were widely discussed. The mass production of aircraft exceeded all records. At the same time, the destruction of warplanes in sky battles surpassed that of previous years. The transport of troops and war equipment by air was greatly augmented; improvement of recent types of planes and invention of new types proceeded at a swift pace; while popular interest

in aviation, both as an instrument of war and as a means for bringing all nations into close communication, was greatly increased.

Significance of Air Power in World War II. The winning of air supremacy by the United Nations, both in Europe and in the Pacific, was viewed as a definite turning point in World War II. The terrific battering of Germany by the U.S. Army Air Forces and the Royal Air Force was intended as the softening of the *Festung Europa* previous to the land invasion. In other words, the primary objective in bombing Germany was to make the coming invasion as economical as possible. This was to be accomplished, as General Henry H. Arnold, commanding general of the U.S. Army Air Forces, stated in his report for the year 1943, by drastically reducing the war potential of the Third Reich and its satellites by bombardment from the air.

The strategic air plan was predicated on the fundamental fact that American and British bombers could fly deep into enemy territory, drop an effective load of bombs and return to base without suffering losses disproportionate to the damage accomplished. The first step in the strategic bombing offensive used by the American-British air forces was the destruction of the enemy's fighter strength. The *Luftwaffe* could be destroyed on the ground, in the air, or in the various stages before it rolled off the production lines. Assuming that the nearer to the final assembly stage the enemy's aircraft is attacked the less time he will have to replenish his front-line strength, the AAF and the RAF frequently knocked out assembly plants. But, for more lasting damage to the enemy, both the AAF and the RAF concentrated on tar-

gets deeper in the industry. These targets—production plants of all kinds—were carefully selected for their importance in German armament.

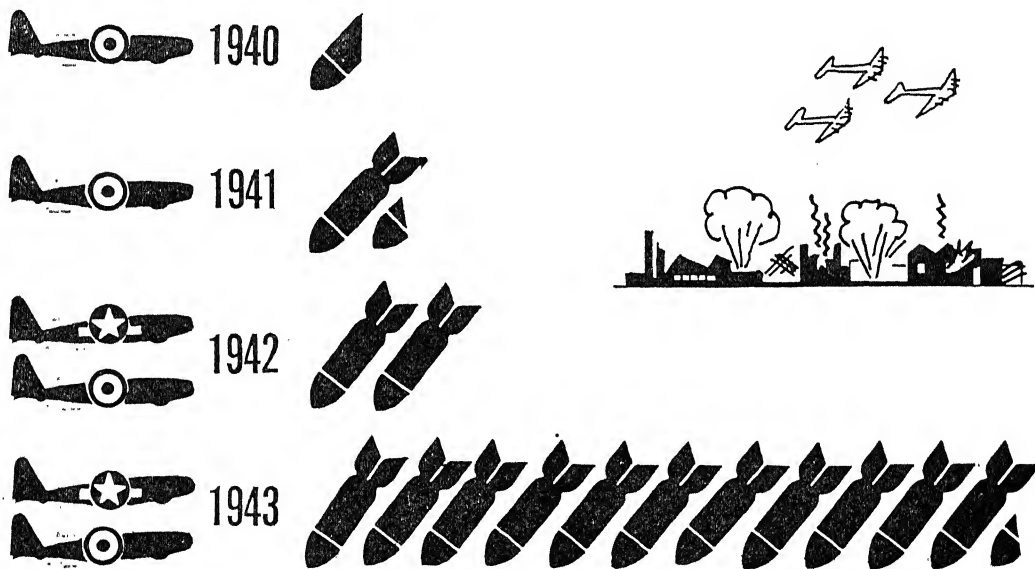
Bombardment of Germany and Her Allies. Some of the missions over Germany in 1942 could rightly be called raids. But many of the assaults of 1943 were major battles that had to be planned as such. This was true regarding the missions against such targets as the Renault works at Paris, the Huls synthetic rubber plants, the Ploesti oil fields, the Heroya magnesium and aluminum plant in Norway, the Focke-Wulf assembly plant at Marienburg, the Schweinfurt ball-bearing plants and the Messerschmitt factory at Regensburg. The effects of these four-hour operations were felt more keenly than a protracted ground struggle for a particular locality. Crippling blows were struck by these missions at relatively small cost. The AAF lost 60 Flying Fortresses at Schweinfurt in the August raid, but the attack was so accurate and severe that months would be required to rebuild the plants. Twenty-four planes were lost in the twin raid on Regensburg, but the *Luftwaffe* suffered a production loss of 500 Me109's as well as 195 fighters that were destroyed or damaged in the air.

The equipment of the escort fighter planes with extra long-range disposable fuel tanks enabled them to give the bombers continuous cover to and from targets formerly out of tactical range. The development of navigational aids which were so accurate that enemy targets could be attacked by bombing through the overcast or at night greatly increased the deadly effectiveness of every mission over enemy territory.

The operations of the AAF and the RAF continued in 1943 as in 1942 to be complementary.

BOMBS ON AXIS EUROPE

TONNAGE DROPPED BY ALLIED PLANES IN FOUR YEARS OF WAR



EACH SYMBOL 25,000 TONS OF BOMBS DROPPED BY THE RAF AND USAAF

The night bombing of the RAF devastated large areas such as Berlin and the Ruhr cities. The day operations of the AAF brought accurate bombing of production targets.

Three trends of the *Luftwaffe* reaction to the AAF operations were reported by General Arnold in his 1943 report. (1) General unwillingness of Nazi fighter planes to join combat with invading aircraft other than heavy bomber formations; (2) furious all-out attack, with little heed of fighter losses, on heavy bombers dispatched against key targets; and (3) increasing employment of fighters equipped with cannon larger than 20 mm. caliber and of twin-engined fighters firing long range rocket projectiles.

The American and British air commands were convinced that the attrition of German fighter aircraft on the Western front would eventually bring the destruction of the *Luftwaffe* as an effective air force. If the same rate of attrition were maintained and German aircraft factories producing these fighters continued to suffer progressive destruction, a point would be reached when Nazi reserves would be exhausted and only a trickle of new replacement supplied.

The bombardment of Germany was in a large measure the result of the autonomy of the air forces under the high command. In Britain, the RAF was one of the three armed services. In the United States, the AAF was a part of the Army. But, under General Arnold, the AAF attained virtual autonomy within the Army. Thus, the Army Air Force worked with, but not under the ground power. It was claimed that the large and modern Italian air force in Libya in 1940 missed its opportunity to knock out the British air force because it was held down to the protection of the Italian ground forces under Marshal Graziani.

Critics of the independence of the air force contended that the aerial bombardment of Germany was not the proper employment for this branch of the armed services. Brig. Gen. Henry J. Reilly, among others, held that air strength should be concentrated in battle to support ground troops and advance them against the enemy. The bombardment of industrial targets in Germany was a dissipation of strategic forces. Tactically, these critics held, too much air power was scattered over the rear of battlefields instead of being concentrated on the enemy's infantry, tanks, and artillery.

Air Power in the Pacific. In the view of the American air command, the original Japanese master plan of conquest was essentially sound, with the exception of the assumption that the United States would eventually yield to war weariness. By a bold attack, Japan amassed the raw materials needed to maintain the Empire on a war economy and also ringed this empire with defensive positions. No traditional mode of naval or land warfare could have broken through the defensive ring that Japan counted on for consolidation of the New Order in Greater East Asia. In fact, throughout the year 1943 the ring remained intact.

Holding that offense is the essence of air power, AAF bombers operating with Navy aircraft and surface warships effectively stopped the sea-borne Japanese forces. The strategy of the Coral Sea and Midway actions in May and June of 1942 were continued in 1943. In March, 1943, the Southwest Pacific Air Force, under Lieut. Gen. George C. Kenney, inflicted a smashing defeat upon a large Japanese convoy in the Bismarck Sea. In this engagement, 162 Allied aircraft sank three cruisers, seven destroyers, and twelve transports, besides destroying fifty-nine planes and causing

the death of 12,700 Japanese airmen, sailors, and troops. The Allied forces lost only one bomber and three fighters in the combat.

The American air command in 1943 made no secret of its view that China was the most important base for the long-expected attack upon the mainland of Japan. In the words of General Arnold, the AAF had no intention of allowing air operations in China against Japan to remain on the basis of guerrilla warfare. It was planned to mass sufficient air power in China to destroy the shipping and war industry of the Japanese mainland even before the armed forces should crumble.

See also MILITARY PROGRESS; NAVAL PROGRESS; WORLD WAR.

Size of American Air Forces. The growth in the American air forces reached phenomenal proportions by the end of 1943. When the Japanese attacked Pearl Harbor in 1941, the entire combat strength of the AAF in America as well as the Pacific was barely 3,000 planes, of which only 1,157 were actually suited to combat service. The AAF possessed only 159 heavy-engined bombers. In Hawaii and the Philippines, there were only 526 planes of all types, and within a few hours only 176 remained. Fourteen Flying Fortresses fought their way to Australia and there formed the nucleus of the now powerful Fifth Air Force.

Out of this disaster rose the most powerful air force in the history of warfare. In 1943, the AAF included 2,385,000 officers and men. As of Oct. 31, 1943, the AAF had flown over a quarter of a million combat sorties, expended more than 40,000,000 rounds of ammunition, used 2 billion gallons of gasoline, destroyed in aerial combat 8,478 enemy planes, probably destroyed 2,555 more planes, and damaged another 2,834. These figures did not include enemy aircraft destroyed on the ground, nor the extraordinary score made by the American Volunteer Group in China under Brig. Gen. Claire L. Chennault. Of the 145,000 airplanes scheduled for production in the fifteen months following Jan. 1, 1944, it was expected that the greater part would go to the AAF.

American Aircraft Production. The remarkable development of the American air forces was only possible through the gigantic expansion of the aircraft industry in the United States which not only equipped the Army and Navy air services but also, through Lend-Lease, supplied a large share of the air equipment of Soviet Russia, Britain, China, and other allies. In 1939, American aircraft plants built 6,315 planes with a total weight of airframes amounting to 6,600,000 pounds. In 1943, the production had gone up to 86,000 planes having a

EXPANSION OF AMERICAN AIRPLANE INDUSTRY

Year	Number of Planes Built	Weight of Airframes in pounds
1939	6,315	6,600,000
1940	12,248	20,700,000
1941	19,500	83,500,000
1942	48,000	276,000,000
1943	86,000	667,000,000

total airframe weight of 667,000,000 pounds. Not only did American industry produce more airplanes but also the size and weight of the average plane was greatly increased. The dollar value of airframes, engines, and propellers produced in 1943 was about \$11,000,000,000 which was more than twice the value of \$5,000,000,000 in 1942 and more than six times the value of \$1,750,000,000 in 1941.

This rise in production was achieved with increases of only 50 per cent in plant area and 45

per cent in employees over the year 1942, according to the conservative estimates of the Aeronautical Chamber of Commerce. At the same time, the improvement in output-per-employee was almost 60 per cent. The total number of employees in airframe, engine, and propeller factories at the end of 1943 was 1,400,000, of whom 40 per cent were women. This compared with totals of 970,000 at the end of 1941. By order of the War Manpower Commission, aircraft plant workers in California and Washington, where there was an acute shortage of labor, were given a temporary deferment from the draft.

From July, 1940, to December, 1943, over 167,000 military airplanes were manufactured in the United States. Starting at a monthly rate of 572

Festung Europa, namely, its roof. It was estimated that three-fourths of the new Nazi fighters were assigned to northwest Europe in order to serve as an interceptor force against attacks by Allied heavy bombers on industrial targets in Germany.

COMPARISON OF AIR FORCES IN 1943
NUMBER OF FIRST-CLASS MILITARY PLANES

United Nations	Planes	Axis Powers	Planes
United States....	42,000	Germany.....	28,000
Great Britain....	26,000	Japan.....	18,000
Soviet Russia....	18,000	Hungary.....	400
China.....	400	Rumania.....	500
		Bulgaria.....	200
Total.....	86,400	Total.....	47,100

At the same time, the new fighters were to serve as the nucleus of the air defense against a northern invasion.

The manufacture of German heavy bombers, especially the four-engined Heinkel-177 was continued. The *Luftwaffe* was still well equipped to carry out raids of 300 bombers on British targets at any favorable moment.

The production of German aircraft was a remarkable achievement in view of the severe damaging of Nazi aircraft plants. The RAF claimed that in 1943, twenty of Germany's biggest industrial cities had been crippled. Lieut. Gen. Carl A. Spaatz, commander of the American Strategic Bombing Force on the Western Front, estimated that the AAF and RAF had knocked out 40 per cent of Germany's planned fighter production in the latter part of 1943. Under the terrific blows of the Allied air forces, German industry had the benefit of the policy of the Technical Directorate of the *Luftwaffe* which early in the war split up the manufacture of parts of warplanes among plants all over Germany. The advantage of this deconcentration of the aircraft industry, however, depended upon the maintenance of an adequate transport system. The deterioration of German railways by hard use, lack of new equipment, and bombardment from the Allies tended to retard the production of aircraft even more severely than if the industry had remained fully concentrated.

The temporary immunity of Japanese aircraft plants from bombardment permitted uninterrupted progress in production. The satellite countries of the Greater East Asia Sphere of Co-prosperity readily supplied what metals were lacking on the Japanese mainland. Thus, losses to the Japanese air forces were almost entirely due to defeats suffered in the air battles on the periphery of the new Empire. Although a considerable expansion of aircraft plants took place, there was reason to believe that in 1943 Nippon, in anticipation of American bombardment of Honshu, Kyushu, and Shikoku, had imitated the German plan of scattering the industry throughout the country. The Mitsubishi Jukugo Kabushiki Kaisha (Mitsubishi Heavy Industries Corporation) whose aircraft and aero-engine plants had been concentrated around Nagoya and the Nakajima Aircraft Corporation whose plants were at Ohtamachi now built new shops in other parts of Japan. Several new types of Nipponese warplanes went into mass production, like the *Shoki* fighter, the *Donryu* heavy bomber, and the *Shitai* patrol bomber. The nationwide reorganization of Japanese industry into three great divisions under the Industrial Adjustment Act of June, 1943, was undertaken in order to speed up the production of both ships and aircraft. By the end of the year, Japanese first-line military planes had been increased by over 50 per cent.

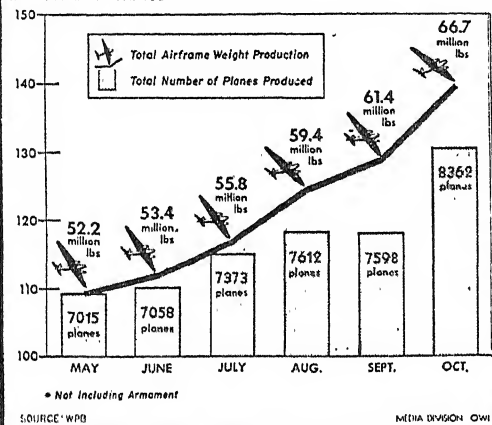
Types of American Military Aircraft. Throughout

MILITARY PLANE PRODUCTION

SHOWING MONTHLY OUTPUT & INCREASE
in airframe weight and number of planes

MAY-OCTOBER 1943

INDEX: APRIL EQUALS 100



planes, the rate increased to 8,862 in December, 1943. American production of 85,919 planes in 1943 exceeded the total output of the Axis powers by two to one, and was greater than that of all other countries combined. Blueprints for 1944 called for a monthly production of 10,000 American planes.

As in 1942, almost one-fourth of the aircraft production in 1943 went to the Allies of the United States under Lend-Lease (q.v.). By September, 1943, this Government had sent Soviet Russia over 7,000 combat planes as well as large quantities of tanks and trucks. In March, Adm. William H. Standley, American ambassador, told a Moscow press conference that Russian newspapers had systematically failed to mention the thousands of planes that Russia had received from the United States. In the following weeks the official newspapers *Pravda* and *Izvestia* informed the Russian people of this American aid.

See BUSINESS REVIEW; ELECTRICAL INDUSTRIES; MACHINE BUILDING; MOTOR VEHICLES; also, materials, as ALUMINUM; MAGNESIUM.

German and Japanese Aircraft Production. In spite of the 250,000 tons of bombs dropped on Germany by American and British air forces in 1943, the German industry was able to increase the first line lighter strength of the *Luftwaffe* by more than one thousand aircraft. The concentration on fighters was obviously a result of the new stage of the war opened by the devastating attacks of the AAF and the RAF through the weakest defense of the

most of the year 1943 the American aircraft industry built in mass production eight types of fighter planes, two types of heavy four-engined bombers, five types of medium, light, and dive bombers, five types of Navy patrol bombers, and two types of Navy observation scout planes.

In a release of the Office of War Information on Oct. 17, 1943, these types were described as follows:

Fighters

Curtiss P-40 (Warhawk). In the opinion of the Materiel Command this famous plane has reached the limit of its developmental possibilities, and after this year it will be produced only in limited quantities, for operational training and for replacement in theaters where they have proved highly successful. The basic P-40 was designed before the war, and was the only fighter in quantity production when the Japs struck at Pearl Harbor. It has gone through numerous type changes. Beginning with the P-40F, both Allison and Merlin engines have been used. From the P to the latest model, the changes have been minor. In all types and over every front the P-40 has made history—and is still making it, although newer fighters excel it in speed and climb. Equipped with light bombs for destruction of ground objectives, P-40's helped stop Rommel's drive in Egypt in the summer of 1942. P-40's ran up the big box score in China, downed the 58 Axis troop transports in the famous battle of Tunisia, and were kept busy over Sicily and Kiska. On July 22, in a contest over Southern Sardinia between 45 P-40's and 25 to 30 enemy fighters, the P-40's shot down 17 of the enemy with a loss of only two of their own number. But in the case of the P-40, these highlights are less important than the fact of its long, steady performance in all climates and over all terrains, from the Russian steppes to the swamps of New Guinea.

Bell P-39 (Airacobra). Although in the latest model P-39 ceiling and general performance have been improved, the P-39 has shared the climb-deficiency of the P-40. It has, however, been used successfully on a wide variety of fronts, including Russia, Alaska, New Guinea, and the Solomons. It is being supplanted by a new model now under construction, with a low drag wing and a two-stage Allison supercharged engine which will make it an efficient plane at any altitude up to 38,000 or 40,000 feet. The greatest efficiency of the P-39 models has been below 15,000 feet. Like the P-39, the new plane will be equipped with cannon as well as machine-guns. About half the total production of P-39's has gone to Russia, where the plane has been particularly effective as a ground-strafting tank-buster in all campaigns from Stalingrad to present operations. In one three-month period a Soviet Air Force Guards group knocked down 33 German planes at the cost of three P-39's, and there is a veteran P-39 flying in Russia today with 31 stars painted on its fuselage, one for each German plane it has destroyed. On August 15, over New Guinea, a force of Airacobras downed three Zeros and eleven Jap bombers, losing three of its own planes.

North American P-51 (Mustang). The original P-51 was a low-and-medium-altitude fighter. Now in production is a new P-51 with a highly super-charged, Packard-built, Rolls-Royce Merlin engine, similar to the Merlin 61 engine in the newest Spitfires. Its performance is reported as even better than that famous ship's. The new engine gives the plane the highest ceiling (up to 40,000 feet) and the highest speed (well over 400 miles an hour) of any fighter in existence. The A-36 (Invader), the fighter-bomber version of the P-51, has seen heavy service in the Mediterranean theater, and its best features are being incorporated in the new P-51, which will replace both the A-36 and the old P-51. On August 1, the 36th anniversary of the United States Army Air Forces, Lieut.-Gen. Carl Spaatz gave special credit to the A-36 for its work over Sicily, saying it has "proved to be a great success in bombing and strafing the enemy tanks, troop concentrations and shipping." Always known as Mustangs by the British, P-51's have been successfully used by them in raids over the continent. They took part in the raid on Dieppe, and were the first single-engined planes based in Britain to penetrate German proper. The RAF have acclaimed the Mustang as the finest Army Cooperation Scout in the world.

Lockheed P-38 (Lightning). The latest model of this fast, powerful fighter has been given greatly increased horsepower in its Allison engine, improved pilot's vision, and improved intercooling for better high altitude performance. It outperforms the Zero and later Jap fighters at all altitudes. The F-5A, a version of the P-38, is the plane used by the Army Air Forces for photographic reconnaissance. Equipped with cameras instead of guns, it ranges over enemy territory at low or high altitude as desired, to bring back pictures of terrain and installations, or of damage inflicted by bombing raids. The P-38 has always possessed the versatility that is coming increasingly to characterize all combat aircraft. It has excelled at low-

altitude strafing, high-altitude fighting, and as a particularly long-range bomber escort. Its distinctive silhouette, with its twin tail booms, has been seen over four major fighting fronts—the Aleutians, New Guinea, North Africa, and Europe. All escorts on the second raid on Rome on August 18 were P-38's. In the daring surprise raid on Foggia on August 25, P-38's flew at only 75-100 feet above the ground. Its especially long range permits it to be ferried directly from bases in the United States to certain combat areas. The two engines of the P-38 provide double security; many a pilot has come home on one engine, the other destroyed by enemy fire. Actually, the construction of the plane forces the enemy to consider three targets: the two engines, and the pilot. This is in contrast to other fighters where the pilot and engine together form but one target.

Republic P-47 (Thunderbolt). The newest fighter at present in combat, the P-47, has been currently rolling up a score of approximately four to one in its contests with Messerschmitts and high-flying Focke-Wulfs over England, France, and the Low Countries. Armed with eight .50 caliber machine guns, and heavily armor-plated, it is capable of flying over 400 miles an hour and of reaching an altitude of 40,000 feet. This "huge, streamlined milk bottle," as it has been called, is the only Army fighter to be equipped with a turbo-supercharged 2,000 horsepower air-cooled Double Wasp engine (Ford-built Pratt & Whitney); the size of this great power plant is apparent from the plane's silhouette. Additional horsepower is being provided in newer models to increase the plane's rate of climb and to give it still greater speed. It is generally considered the world's best single-engine fighter for high-altitude operations. On July 30, P-47's supporting B-17's bombing Kassel in Central Germany shot down 25 Nazi fighters with a loss of six. On September 25, P-47's gave fighter protection to Fortresses on an 800 mile flight to Emden. It was the first time that our bombers received fighter escort on such a long trip from English bases.

Grumman F4F (Wildcat). This Navy fighter, with Pratt & Whitney Twin Wasp air-cooled engine and with folding wings for compact stowage on aircraft carriers, has run up many high scores in Mediterranean, Atlantic, and Pacific fighting. Despite its limitations of speed and ceiling, it has maintained a consistent advantage of at least five to one over Japanese aircraft, mainly by use of superior tactics. Notable was the battle of June 16, when a Jap armada attempted to attack Guadalcanal; 94 Jap dive-bombers and fighters were smashed, against a loss of six Wildcats. Although the F4F will continue to be manufactured for use on auxiliary carriers and for training, it is now being supplemented by a new plane now in production, the Grumman F6F (Hellcat).

Grumman F6F (Hellcat). The newest member of the Navy's fighter family is described by the Navy as "an answer to the prayers of our pilots for a plane which can fight the Zero on any terms." A big brother of the famous Grumman Wildcat, the Hellcat has better range, speed, climb, maneuverability, and altitude. It has a 2,000 horsepower engine as compared with the Wildcat's 1,200. It has a low wing, improved armor, and a new flexible type gasoline tank which is an improvement over the ordinary puncture-proof type. It carries .50 caliber machine guns and has plenty of additional space for ammunition for prolonged air battles. The Hellcats saw their first action on September 1, when they accompanied Navy bombers on an attack on Marcus Island in the Pacific. However, they didn't get a chance to test their mettle against Jap Zeros—because all the Zeros were destroyed on the ground by our bombers. The Navy is enthusiastic about the potentialities of the Hellcat.

Vought F4U (Corsair). The Corsair also has a 2,000 horsepower Pratt & Whitney engine and is easily distinguishable by its inverted gull wing. The Corsair has recently been the chief Navy fighter in the South Pacific. Hellcats are beginning to join it in large numbers. In all departments of combat performance it has shown superiority to all models of the Jap Zero—higher speed, faster rate of climb, and far greater ability to absorb punishment. On April 25, four U.S. Marine Corps pilots, flying Corsairs, encountered 40 or more Jap planes, shot down six and lost two; all but one pilot returned safely. This plane is also being made by Brewster, with the designation F3A, and by the Goodyear Aircraft Corporation with the designation FG1.

Heavy Bombers

Boeing B-17 (Flying Fortress) and Consolidated B-24 (Liberator). The newest models of both bombers are equipped with new defensive armament in the form of nose turrets with machine gun installations. External bomb racks can increase the potential bomb capacity of the B-17 to 20,800 pounds. Nevertheless, this plane has a slightly smaller bomb capacity at long range than the B-24. The B-17 is being concentrated in the Western European theater and the B-24 is being used chiefly elsewhere—in the Middle East, in India, China, and Australia—for longer range operations. B-24's have made round-trip flights up to 2,600 miles; the raid on the Ploesti oil fields in Rumania from bases in Egypt, the raid on the Messer-

schmitt works at Wiener-Neustadt, and raids in the Pacific to Wake, Paramushiru, and Surabaya. The B-24 is used by the Navy under the designation PB4Y-1, for land bombers in the South Pacific and for anti-submarine warfare. The B-17, with its Wright Cyclone engines, and the B-24, with its Pratt & Whitney, have set an unrivalled record for large-scale, precise, daylight destruction of enemy targets. The past year has proved to the hilt the validity of the American theory of precision daylight bombing which aims to destroy key parts of highly strategic industries such as fighter aircraft factories, oil and rubber plants, and power installations. Heavy night-bombing of European targets continues to be accomplished chiefly by British Lancasters and Halifaxes.

Medium, Light, and Dive Bombers

North American B-25 (Mitchell). New models of this two-engine Tokio raider are equipped with heavier armament and possess increased speed and range. The B-25 is the chief medium bomber in the present program, production of the Martin B-26 (Marauder) being tapered off. B-25's powered with Wright Cyclone engines, are flying on eleven fronts, are used by both Army and Navy for anti-submarine patrol service, and have scored particular successes with skip-bombing.

Martin B-26 (Marauder). Despite its high speed, good load capacity, and excellent combat performance in several theaters, notably in New Guinea, the Mediterranean, and Europe, the production of this plane is being tapered off. Air Forces' policy is to reduce the number of models, concentrating production on highest performance types in a combat classification. Changing demands of tactical operations also entered into the decision to use trained Martin personnel and factory space for production of other more urgently required bomber types.

Douglas A-20 (Havoc). This is the principal light Army bomber in the program until the totally new, advanced light bomber mentioned above comes into production. The newest Havoc, used by the Army for low-level bombing, is fitted with a power turret and with armament for ground strafing. A-20's powered with Wright Cyclone engines, are highly versatile, and have been active over Tunisia, Australia, and New Guinea. A-20's are widely used by the RAF under the designation "Boston." The A-24, Army version of the Douglas SBD (Dauntless) dive-bomber, is now being produced in decreasing numbers, chiefly for training purposes.

Douglas SBD (Dauntless) dive-bomber. Improved SBD's with increased horsepower and armament have gone into combat areas in large numbers. They have dive-bombed many Jap vessels to the bottom and destroyed many fighters. On some occasions in the Pacific, SBD's have taken on jobs more properly done by fighters, as for instance acting as patrol against Jap torpedo and dive-bombers. In some of these engagements the SBD's have suffered heavily from the Japs' fighter escorts; in others they have made brilliant scores.

Grumman TBF (Avenger). This is the Navy's carrier-based torpedo-bomber, which has completely supplanted the Douglas TBD (Devastator). It carries machine guns as well as torpedo or bombs, and has destroyed many Japanese vessels in the Pacific.

Navy Patrol Bombers

Chief among the Navy's patrol bombers are three flying boats and two land planes. The land planes are the Consolidated PB4Y-1 and the Vega PV-1. The flying boats are the Consolidated PBV (Catalina), Consolidated PB2Y (Coronado), and Marlin PBM (Mariner). All three flying boats are used for transport purposes as well as for patrol and bombing operations. The two-engine PBV, the oldest, slowest, and smallest, the ship which first spotted the Jap forces on the Aleutians, is still being built, still dive-bombing and strafing enemy shipping and rescuing pilots who have been downed at sea. The four-engine PB2Y has double the horsepower of the PBV. The PBM does good work in anti-submarine coastal patrol and long-range reconnaissance. Not even the newest Navy flying boats have speeds much above 200 miles an hour, but all are required to be able to land in a choppy sea with four to five foot waves. The Vega PV-1 (a Navy adaptation of the twin-engined Vega B-34 "Ventura" bomber) is the Navy's chief land-based anti-submarine patrol plane. It carries depth charges or a torpedo, is heavily armored, and is now often used in preference to flying boats in anti-submarine operations because of its greater speed. The Consolidated PB4Y-1 is a 4-engine land-based bomber and, as previously mentioned, is used for long-range bombing missions and for anti-submarine patrol work.

Navy Observation Scouts

Navy's observation scouts are the Vought Kingfisher OS2U-3 and the Curtiss Seagull SO3C-2. They are used principally on cruisers and battleships for patrol and observing naval artillery fire. These Navy observation scouts were used effectively in the African and Sicilian campaign in spotting positions of tanks, guns, trucks, and other enemy equipment, and reporting it to naval craft for bombardment.

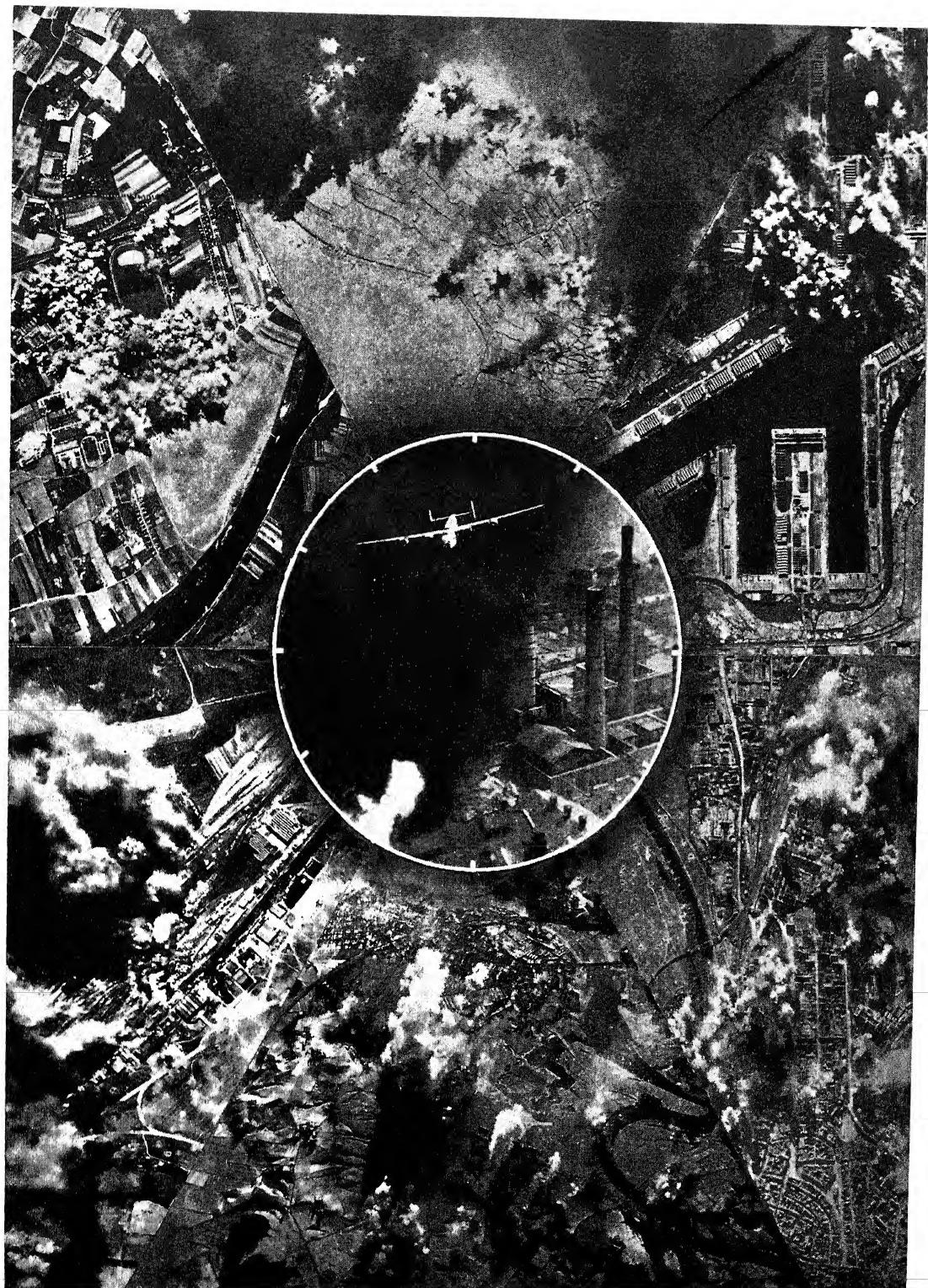
In October, General Arnold partially lifted the ban on information regarding a third American super-bomber, the Boeing B-29. This plane, developed in close cooperation between the Boeing staff at Seattle and the AAF and its Materiel Command, was said to be as far ahead of the B-17 and B-24 as the Flying Fortresses surpassed the prewar bombers. The new bombers would be able, the AAF disclosed, to attack Germany from American shores and Japan from points now held by Allied forces.

A new type of dive bomber, the Curtiss-Wright Helldiver, officially designated as SB2C, was put to combat test in the attack on Rabaul on Armistice Day. In this raid, a squadron of Helldivers sank a light cruiser and a destroyer, damaged another light cruiser and probably damaged a second destroyer. The total score of all American planes in this engagement was: 1 light cruiser and 2 destroyers sunk; 2 heavy cruisers, 1 light cruiser, and 8 destroyers damaged; and 88 enemy planes destroyed. The Helldivers, larger and heavier than other American divers, came through the battle without loss. The new Curtiss SB2C was powered by a Wright Cyclone engine with Curtiss constant speed and full-feathering propeller.

In December, the War Department disclosed that two new and superior Army fighter planes were in production and would soon join the Lockheed P-38 (Lightning) and the Republic P-47 (Thunderbolt). When the new planes should pass the combat tests they would displace the old types. Toward the end of the year, the Army Air Forces had also secured production of a powerful new night fighter, a twin-engined plane called the Black Widow. Officially known as the P-61, the new fighter was heavily armored and equipped with new devices for attack on enemy bombers. Powered by two Pratt & Whitney engines, it possessed a long cruising range, great speed, and climbing performance.

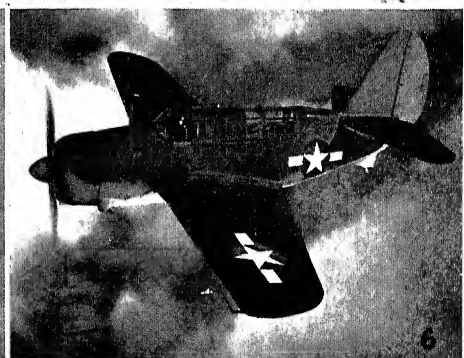
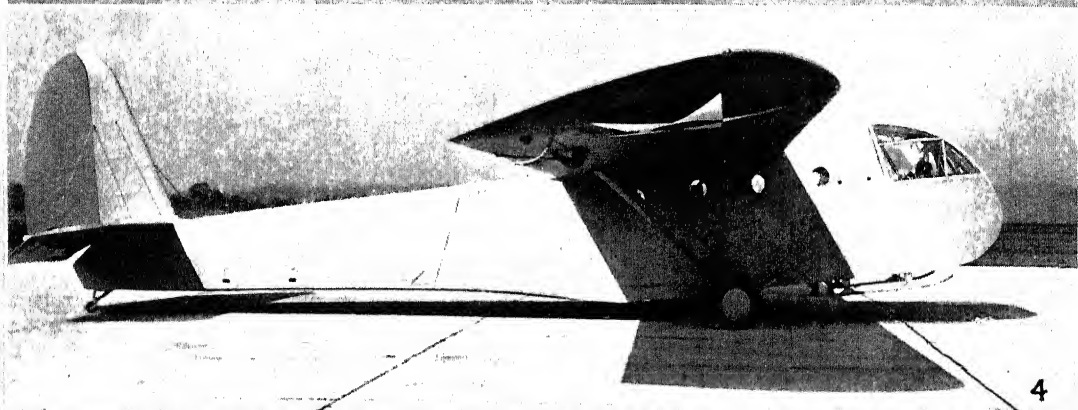
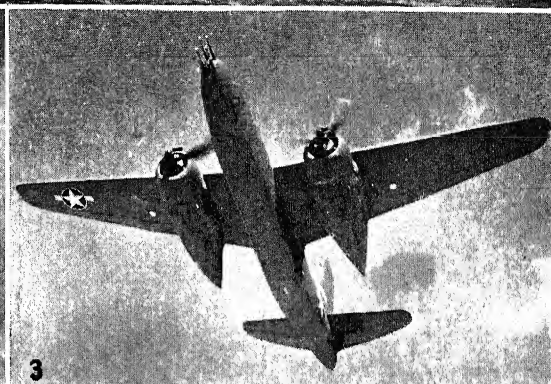
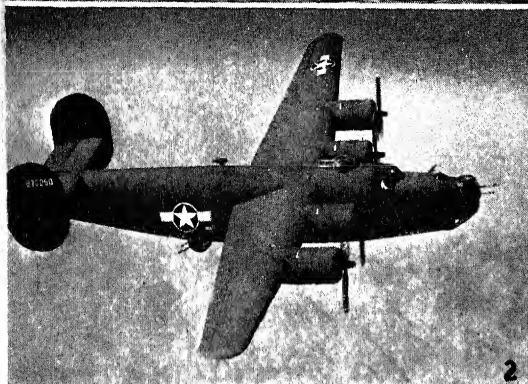
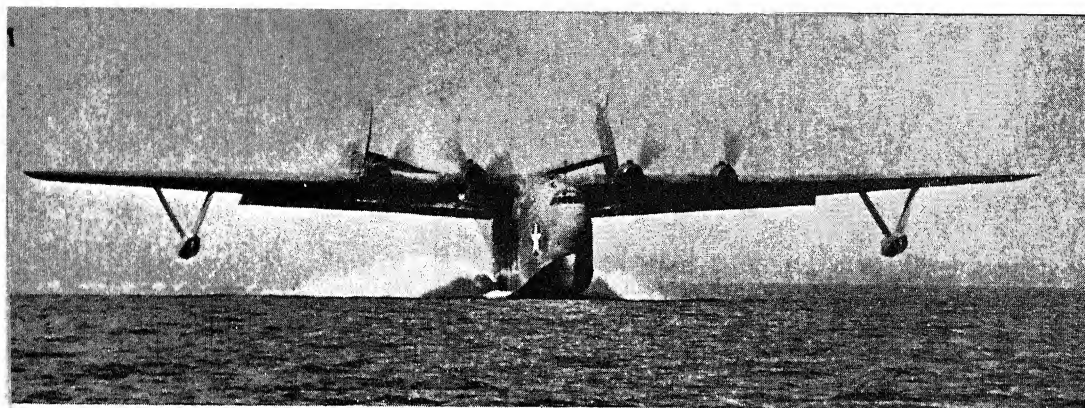
American Transports. The year 1943 witnessed extensive use of available planes for wartime air transport and the manufacture of many new models. Transport planes for military use included: (1) airline planes taken over by the Army in 1942; (2) bombers used for transport without alterations and other bombers manufactured in converted design; and (3) newer airplanes, designed for commercial passenger operation, but delivered to military use before being placed in commercial operation. Outstanding service was rendered by the Douglas DC-3, frequently called "The workhorse of the air lines." No models of the Douglas DC-3 were delivered to commercial lines after January, 1943, but instead they were manufactured in several models for the Army and Navy. The Army C-47 (Skytrain) had a large door for loading of cargo, a metal floor, and reinforced landing gear. The Army C-53 (Skytrooper) was equipped with a wooden floor, benches along the sides for troops, and a tow cleat on the tail for glider towing. The Navy designations of the same plane were R4D-1, 3, 4, and 5 according to details in structure.

Both the Skytrain and the Skytrooper were powered by twin 1,200 h.p. engines. The standard gross weight for commercial operations had been 25,200 pounds, but the Douglas C-45 was frequently flown at 29,000 pounds. Empty, the C-45 weighed 17,000 pounds. The fuel capacity was 822 gallons, the average cruising speed 180 miles per hour, and the average cargo load 5,000 pounds. It had a range of 1,500 miles without refueling. The normal fuel capacity could be doubled by the installation of tanks in the fuselage for trans-At-



ROUND-THE-CLOCK BOMBING OF OBJECTIVES IN EUROPE

Center: A B-24 over the chimneys of the blazing Astra Romana Refinery of the bombed Ploesti oil fields, Rumania. Clockwise from top: Precision bombing of the Pantelleria airdrome. Two o'clock: Heavy bombers attack Ford and General Motors plants in Antwerp. Four o'clock: First wave of Flying Fortresses attack ball-bearing factories at Schweinfurt, Germany. Six o'clock: Liberators bomb the Nazi repair base at Kjeller, Norway. Eight o'clock: Attack by Marauders on San Littoria railway yards, Rome. Ten o'clock: Attack on Regensburg, Germany. Photos courtesy U.S. Army Air Forces.



Photos courtesy of the manufacturers except Mars (1) Official U.S. Navy Photo

NEW PRODUCTS OF AMERICAN DESIGNERS

1. Martin XPB2M-1 (Mars)
2. Consolidated Vultee B-24 (Liberator)
3. Douglas A-20 (Havoc)

4. Waco CG-4A Glider
5. Curtiss C-46 (Commando)
6. Curtiss SB2C-1 (Helldiver)

lantic or trans-Pacific flights. Thus heavily loaded, the plane had a range of 3,000 miles, and frequently flew from Hamilton Field in California to Hickam Field in Hawaii.

For military personnel and cargo transport, these Douglas planes are used more than any other model. In 1942, the Army C-53 flew American and British paratroops the 1,500 miles from England to Africa. Its troop-carrying capacity was 28 plus a crew of 4. In 1943, the Douglas C-47 began to be displaced by the C-46 which at a 1,500-mile range carried almost twice as much cargo, namely four jeeps or six airplane engines in boxes.

Another transport type was the Boeing 314 Flying Boat (Clipper). Formerly in exclusive operation by the Pan American Airways, the Boeing 314 was until late in 1943 the largest airplane in general use and carried the largest passenger load. In service since 1939, and licensed to carry 74 passengers and 15 crew, the Clipper had carried this load only on short hops as from New York to Bermuda. Only 58 passengers were carried on flights across the Atlantic. With a 150-foot wing span, it was propelled by four 1,600 h.p. engines of the Wright R-2600 model. It had a gross weight of 84,000 pounds, but was sometimes flown at 88,000 pounds with heavy cargo. The commercial or useful load was 38,000 pounds. The average cruising speed was 143 miles and the plane could make 200 miles per hour. The fuel capacity was 5,448 gallons.

It was in a Boeing Clipper that President Roosevelt crossed the Atlantic for the historic Casablanca Conference in January, 1943. The Boeing 307 (Stratoliner), in service since 1940, was the first airplane to introduce a pressurized cabin in air transportation. This device permitted passengers and crew to enjoy low altitude flight conditions while flying at high altitudes. Pressurizing began at an altitude of 8,000 feet, the ratio of the air inside the cabin to the air outside the cabin increased proportionately with the altitude. The Stratoliner was powered by four 1,100-h.p. engines. The gross weight was 45,000 pounds. Empty it weighed 29,000 pounds. The cargo capacity was 8,000 pounds on a 1,000-mile flight. The fuel capacity was 1,700 gallons, and the cruising speed was 185 miles per hour. It carried 33 passengers and a crew of five. Built originally for the TWA (Transcontinental and Western Airline), the Stratoliners were taken over by the Army in 1942. As Army C-75, these planes were used in establishing the Air Transport Command over routes to Africa and India. In 1943, the building of the plane was discontinued in favor of the C-54A.

In 1943, many bomber planes were used for transport purposes without any alterations. Bombers that were being ferried abroad for foreign service carried personnel and strategic cargo which was discharged before going into combat service. Among the bombers that were manufactured in converted design was the Consolidated C-87 (Liberator Express). This was the transport version of the Consolidated B-24, the famous Liberator Bomber. Propelled by four 1,200-h.p. Pratt and Whitney R-1830 engines, these 29-ton planes had a cargo capacity of 10,000 pounds on 1,000-mile flights and 6,000 on the longest transoceanic ranges. With its high wing, its enlarged side door, and tricycle landing gear, the Consolidated C-87 was an easy ship to load. But, like all bombers, its cubic capacity for freight was small. It held 20 passengers and 5 crew, but could take no jeeps. With added gas tanks it had a 3,000-mile range.

In 1943, more C-87's were used by the Army Transport Command than any other four-engined plane, but it was being superseded by the C-54 which had better cargo facilities and more efficient performance. It was a Consolidated C-87 in which Wendell Willkie made his round-the-world flight in 1943.

In 1943, the Army Transport Command employed a large number of newer airliners, designed for passenger and cargo operation but delivered to military use before being put into commercial service. Among these types was the Douglas DC-4 (Skymaster) which bore the Army designation of C-54 when designed as a passenger transport and C-54A as a cargo carrier. The Navy designation was R5D. Propelled by four 1,350-h.p. engines, it had a gross weight of 66,000 pounds, with a pay load of 14,000 pounds. The cruising speed was 200 miles; the fuel capacity was 3,700 gallons with four fuselage tanks in use. In December, 1943, President Roosevelt, following the Teheran Conference flew over the battlefields of North Africa and visited Malta in a Douglas C-54.

The Curtiss-Wright Commando became Army C-46. Originally designed as Model CW-20, with a passenger capacity of 30 and 4 crew, this plane was first operated in 1941 on British government airways. It was one of the most efficient two-engined carriers for hops under 1,500 miles. It carried 40 paratroops, or else three jeeps, or two light tanks of 4,000 pounds each. Powered by two 2,000 h.p. Pratt and Whitney R-2800 engines, with a wingspread of 108 feet, it had a gross weight of 48,000 pounds, and carried a pay load of 10,000 pounds on a 1,000 mile flight. The fuel capacity was 1,000 gallons.

Among the planes introduced but subsequently discontinued was the Curtiss-Wright C-76 (Caravan), the first plane to be designed as a short-route cargo carrier. Constructed entirely of plywood rather than aluminum alloy, it was powered by two engines. Speed was sacrificed for loading ease.

The Lockheed C-69 (Constellation) was designed to fill the need for a long-range passenger transport plane with a pressurized cabin to permit flights in the stratosphere at altitudes above 20,000 feet without discomfort to the passengers and crew. The plane had four 2,200-h.p. Wright R-3350 engines, a gross weight of 73,500 pounds, and a fuel capacity of 4,800 gallons. It had a cruising speed of 255 miles at sea level which increased to 300 miles at an altitude of 19,000 feet. The wingspread was 123 feet and the length, 95 feet. Built to carry 55 passengers, this gigantic plane was designed as a troopship in wartime, while it was proposed as a new development for postwar commercial use.

In December, 1943, a new flying cargo boat, the Martin XPB2M-1 (Mars) completed its first war mission in the Naval Air Transport Service. It flew from Patuxent River in Maryland to Natal in Brazil, in a nonstop trip of 4,375 miles, carrying 13,000 pounds of Christmas mail to the armed forces. From Natal, the Mars returned to Patuxent with three stops, and carrying from Belem to Port-of-Spain a record cargo of 35,000 pounds of war materials. Propelled by four 2,000 h.p. engines, this sea monster had a wingspan of 200 feet, a length of 117 feet and a height of 36 feet. Its weight was 140,000 pounds. As a troopship it could carry 150 men and a crew of 11.

British Types. In 1943, the Spitfire and the Hurricane which had won the Battle of Britain in 1940 were still the favorite fighters. (See preceding YEAR BOOK for details.) Latest models had new

devices of armament. The Hurricane Tank-buster now carried two 40 mm. cannon under its wings. A more recent addition to the Fighter Command of the Royal Air Force was the Typhoon, manufactured by Hawker Aircraft Ltd., the builders of the famous Hurricane. The Typhoon was a single-engine monoplane, highly maneuverable, with a speed in excess of 400 miles per hour, and even so carried an armament of twelve machine guns or else four cannon in its wings.

The Bomber Command included Wellingtons, Lancasters, Bristol Blenheims, Stirlings, and Halifaxes. (See preceding YEAR BOOK for details.) The surprise bomber of the RAF in 1943 was the Mosquito, built by de Havilland Aircraft. With an airframe made entirely of wood, and with a speed of 350 miles per hour, the Mosquito was probably the fastest bomber in the world. It carried a bombload of 2,000 pounds and made a notable record in daylight bombing of Berlin.

In the field of transport, the newest development was the Avro York, a commercial version of the huge Royal Air Force Lancaster. Powered with four Rolls-Royce Merlin liquid cooled 1,200 h.p. motors driving three-blade constant-speed airscrews, this plane had a cruising speed of 180 miles per hour. With a wingspread of 102 feet and an over-all length of 78 feet it furnished accommodation for fifty passengers. See GREAT BRITAIN under *History*.

Soviet Russian Types. Considerable secrecy continued to shroud Russian military aircraft. One of the latest fighter models was the LAGG-3. With an airframe like the Spitfire, this plane was constructed of plastic bonded wood. A 20 mm. cannon fired through a hollow airscrew shaft. With a 1,600 h.p. engine it had a maximum speed of 385 miles and could climb 10,000 feet in five minutes. Several models of the speedy YAK-1, designed by Alexander Yakovlev, were in use.

The Iliuchin IL-2, usually known as the Stormovik, remained the best known of the Soviet planes. It was powered by a 1,300 h.p. AM-38 twelve-cylinder in-line motor and had a top speed of 280 miles. It was a fighter-bomber or low-level attack plane. Eight 56-pound rocket-propelled bombs were carried on racks beneath the wings in addition to an armament of two 32 mm. cannon and four machine guns. Flying low over Nazi tanks or troops, the Stormovik proved an effective tank-buster and ground strafers. A newer model, the Iliuchin IL-3, carried a gunner in addition to the pilot, who fired a cannon fitted in the rear of the cockpit enclosure. The Sukhon SU-2, a medium level single-engined bomber, came into use. The dive bomber and reconnaissance Petlyakov Pe-2 was used in large numbers by the Red Air Forces. It had a maximum speed of 300 miles per hour with a bomb load of 1,300 pounds. There was forward-firing armament of three machine guns and a rearward armament of three hand-operated guns. A later version, the Pe-3, had a dorsal turret at the rear of the cabin.

Among the heavy bombers much reliance was placed on the Iliuchin DB-3F. This was the first Russian bomber to attack Berlin. It also made raids on Königsberg, Danzig, and Warsaw, dislocating German traffic. The DB-3F was powered by two 1,100 h.p. M-88 engines. The maximum bomb load was two tons and the maximum range 2,500 miles; the speed was 365 miles per hour. The latest bomber type was the Er-2 designed by Yakovlev. Beyond the fact that it was propelled by two in-line engines few details regarding its construction were known.

Besides these Russian designed planes, the Red Air Forces used large numbers of American planes under the following designations: the fighter plane Bell P-400 (Airacobra), the fighter Curtiss Hawk 87A3, the attack bomber Douglas DB-7b, and the reconnaissance flying-boat GST built by the Consolidated Aircraft Corporation.

Axis Types. The *Luftwaffe* entered World War II with one single-seat fighter, the Messerschmitt 109E; one single-motor Stuka or dive bomber, the Junkers 87B; one heavy bomber, the Heinkel 111H-2; and one reconnaissance-bomber, the Dornier 17. New types were designed but usually the multi-purpose of each plane was retained. For instance, the Heinkel 112's, Messerschmitt 109's, and the Focke-Wulf 190's could be used as fighters, fighter-bombers, ground attack planes, and reconnaissance planes. The Dornier 217 which appeared in 1942 was designed for both horizontal and dive bombing and torpedo carrying. This versatility of planes had the advantage of economy. It was, however, a drawback to achievement in specialized fields.

In 1943, the bulk of the fighters were Messerschmitt 210's and Focke-Wulf 190's. The ground attack planes included the Focke-Wulf 189 and Henschel Hs129. Originally powered by an Argus engine, the Hs129 was in 1943 fitted with French-built Gnome-Rhône radial motors. The Henschel was heavily armed; the 1943 model carried a 30 mm. cannon beneath the fuselage interchangeable with external bomb racks. For raids on Britain, the Dornier DO217E2 was used. For convoy raiding, the Germans still relied upon the Focke-Wulf Fw200k2 (Kurier II) which was a four-engined patrol bomber. This plane was developed from the Focke-Wulf Condor passenger and freight transport. It had a range of 2,000 miles at 170 miles per hour. The largest transport plane was the gigantic Messerschmitt Me323, powered by six engines. The nose, divided centrally, could be opened to admit a three-ton truck or a small tank. It could hold one hundred fully armed troops. Without adequate armament it was extremely vulnerable to attack. The Junkers Ju52-3mF was the latest version of the most used transport plane. It was powered by three 845 hp. BMW132Dc1 radial motors. During the final stages of the Tunisian campaign, fleets of Junkers 52 attempted to deliver supplies to the hard-pressed German army of Marshal Kesselring. Junkers 52s were also used to transport supplies to Marshal von Paulus when surrounded by the Red Army at Stalingrad.

The long heralded "secret weapon" of Hitler turned out to be rocket-equipped German fighter planes. The rockets, one under each wing of the plane, were aimed like machine guns and discharged by electric fuses. The trajectory of the rockets was high and uncertain, but when lobbed from 1,000 yards into a close formation of heavy bombers they caused great damage. Bomber squadrons of the U.S. Eighth Air Force countered this menace by weaving from side to side while American fighter escorts attacked the rocket-carriers. Another device was the rocket-powered glider-bomb known as the Henschel-293. Ten feet in length, with a wing span of fifteen feet and weighing 2,500 pounds, it had a maximum speed of 300 miles per hour. This glider-bomb was launched by rocket propulsion from a Dornier 217 or a Heinkel 177.

Little information was released regarding Japanese military and transport types in 1943. From Japanese planes taken in the island hopping campaign, however, the AAF gathered information regarding new developments. The Super Zero manu-

factured by the Mitsubishi Heavy Industries Corporation remained the principal fighter plane. It was much faster, had more climbing capacity, and was able to dive more swiftly than the earlier Zeros. (For details see preceding YEAR BOOK.) This plane, however, proved no match for the P-40 Warhawks of the Fourteenth Air Force in China.

Performance of American Combat Aircraft. By the year 1943 it was clear that the performance of American airmen and planes surpassed that of the Axis powers in every theater of operations. The test of battle—the ultimate criterion of performance—showed a box score decidedly in favor of American air forces. This record did not develop simply from American superiority in numbers of planes in combat areas. Although numerical superiority was attained in 1943 on most fronts, nevertheless, it was in China, where the United States still had fewer planes than the Japanese, that one of the highest box scores was made.

A report released from the Office of War Information on Oct. 17, 1943, showed that from Dec. 7, 1941, the date of the Japanese attack on Pearl Harbor, to Sept. 1, 1943, American Army combat

nault announced at the headquarters of the Fourteenth Air Force in China that during the thirteen months from July 4, 1942, when the United States took over the American Volunteer Group, to Aug. 4, 1943, the American air force had destroyed 442 Japanese planes and probably an additional 166 planes. The American loss was 51 planes, which made a score of almost nine to one.

The U.S. Navy reports showed that Corsair, Wildcat, and Hellcat fighter planes in 1943 destroyed 884 Japanese warplanes with a loss of only 170 American aircraft. The first ten days of combat in the summer of 1943 in the North Solomon Islands resulted in the destruction of 199 Japanese planes at a cost of 34 American planes. On one day, June 30, 1943, the Japanese lost 101 planes to 14 American planes. The box scores indicated that the vast air force which the United States had built was suited to the global nature of the war, that it was powerful, well balanced and adapted to the strategic and tactical tasks imposed on it.

Jet-Propelled Aircraft. One of the spectacular developments in the year 1943 was the production of fighter airplanes employing jet-propulsion engines

BOX SCORES OF AMERICAN VERSUS AXIS AIRCRAFT
Report of Office of War Information, Oct. 17, 1943

<i>Name and Location of Air Force</i>	<i>When</i>	<i>Enemy Loss</i>	<i>Our Loss</i>	<i>Rate</i>
Army Air Forces	Dec. 7, 1941–Sept. 1, 1943	7,312 enemy planes	1,867 planes	Almost 4 to 1
Army Air Forces	March 1–Sept. 1, 1943	5,389 enemy planes	1,239 planes	Better than 4 to 1
Heavy bombers	Jan. 1–June 30, 1943	1,333 enemy planes	316 planes	Better than 4 to 1
Medium bombers	Jan. 1–June 30, 1943	113 enemy planes	69 planes	Almost 2 to 1
Fighters	Jan. 1–June 30, 1943	763 enemy planes	375 planes	Better than 2 to 1
Fortress of Eighth American Air Force based in Britain	Month of July, 1943, dropping 3,600 tons of bombs on enemy targets	500 German fighters	108 Fortresses	Better than 4 to 1
Eighth and Ninth American Air Force, Over Sicily, Sardinia, and southern Italy	Month of July, 1943, while dropping 12,460 tons of bombs	342 enemy planes	190 planes	Almost 2 to 1
Fourteenth American Air Force—China	Thirteen months from July 4, 1942 to Aug. 4, 1943	442 enemy planes	51 planes	Almost 9 to 1
Navy—North Solomons	First ten days of June 1943, offensive	199 enemy planes	34 planes	Better than 5 to 1

planes flew a total of 223,758 sorties in which they dropped a total of 105,649 tons of bombs. On these missions, the American Army planes destroyed 7,312 enemy planes, including 1,033 destroyed on the ground, and they probably destroyed an additional 2,196 planes, while 2,535 enemy planes were damaged. Of American planes, only 1,867 were destroyed in combat in the air. For the six months ending Sept. 1, 1943, American planes destroyed 5,389 enemy planes, probably destroyed an additional 1,502 planes, while damaging 1,860 planes. At the same time, 1,239 American planes were lost in aerial combat.

The box score by plane types showed that among Army planes the heavy bombers had the best record. From January 1 to June 30, 1943, Army heavy bombers destroyed 1,333 Axis planes against a loss of only 316 bombers, a little better than four to one. Army medium bombers during the same period destroyed 113 enemy planes against a loss of 69, almost two to one in favor of American ships. Army fighters shot down 763 enemy planes against a loss of 375 of their own planes, slightly better than two to one. Over Sicily, Sardinia, and Southern Italy, during the four weeks of action ending July 28, 1943, the Eighth and Ninth Air Forces (American) dropped 12,460 tons of bombs and destroyed 342 enemy planes, and probably destroyed 54 in addition, at a cost of 190 American planes.

On Aug. 4, 1943, Maj. Gen. Claire L. Chen-

which eliminated the necessity for propellers. The design was originally British. In 1937, Group Capt. Frank Whittle completed his first successful engine. The Air Ministry placed its primary order for a jet-propelled plane in 1939 with Gloucester Aircraft Company, Ltd., Gloucester, England. The engines were built by Power Jets, Ltd., in a special factory to which Group Captain Whittle was assigned.

The first successful flight of the jet-propelled airplane was in May, 1941, the pilot being Flight Lieut. P. G. Seyers. Full information about the new engine was disclosed, in July, 1941, to the U.S. Army Air Forces. The engine that had made the first flight was then sent to the General Electric Company. With close cooperation between the Army Air Force, the Materiel Command at Wright Field, the Royal Air Force, the Ministry of Aircraft Production, and the General Electric Company, new engines were constructed. The Bell Aircraft Company undertook the task of building an airframe suitable to operate with two of these engines. The first flight in the United States was made in October, 1942, with Robert M. Stanley, Chief Test Pilot of the Bell Aircraft Company, at the controls. This was followed by several hundred successful flights in the United States and by British pilots with British airplanes in England, many of them at high altitudes and extreme speed, such as 500 miles per hour, and all without a single mishap.

While the details of the new engine remained a

military secret, the principle of jet-propulsion was well known in engineering circles. By mixing air with explosive gases, the jet-propelled plane was moved by the transfer of momentum or a continuous recoil. Air, taken through the nose of the plane, was compressed, heated, mixed with a fuel and ignited, whereupon it was released at the tail of the plane or the edges of the wings, producing an explosive recoil. Plans were developed to have jet-propelled planes in large scale production in 1944.

For other research, see NATIONAL BUREAU OF STANDARDS.

Radar. The year 1943 witnessed further progress in the development of radar (an abbreviation of *radio direction and ranging*), a radio means of locating and measuring the distance to a target. Night fighter planes were equipped with radar to guide them to enemy bombers. On the other hand, radar became extensively used to control the fire of anti-aircraft guns, and at night largely replaced or supplemented the searchlight. See PHYSICS under *Radar*.

Giders. Glider enthusiasts in the United States predicted a brilliant postwar use of this craft for freight and passenger traffic. Several companies made application with the Civil Aeronautics Board for cargo-carrying air service which would utilize gliders towed by aircraft. It was held that they were particularly useful inasmuch as an airplane could thereby drop a load without landing.

For military use, gliders came into mass production in 1943, when over 10,000 had been constructed in the United States. The principal type was the Waco CG4A. It had a wingspan of 84 feet, weighed 8,000 pounds, and carried 15 fully armed troops, two of whom acted as pilot and co-pilot. The battle for Sicily began on July 9, 1943, when Waco glider-borne troops as well as paratroops landed on the island. In July also occurred the first crossing of the Atlantic by a fully loaded glider. The towing plane was Douglas C-47 transport, the glider, a Waco CG4A. The operating crews came from the Royal Air Force. Leaving Montreal with a maximum load of vaccines for Russia, radio, aircraft, and motor parts, the air train crossed the Atlantic, a distance of 3,500 miles, in twenty-eight hours.

The Helicopter. A considerable number of helicopters, first demonstrated by Ivor Sikorsky in 1942, were constructed for the British and American air forces in 1943. This heavier-than-air craft was capable of hovering in the air without forward movement of moving sideways or backwards, or of landing and taking off vertically. The helicopter used by the Army was YR-4. The airframe was 35 feet long. The rotor was composed of three nineteen-foot blades driven by a 180 h.p. engine. The plane was designed to execute missions over areas where conventional aircraft could not land. The YR-4 was capable of carrying a ton of food, ammunition, or medical supplies.

The Air Transport Command. The air traffic needs of the armed forces of the United States were supplied by: (1) the Troop Carrier Command of the Army Air Force, (2) the Air Transport Command, and (3) the Naval Air Transport Service. The function of the Troop Carrier Command was the tactical delivery of troops and supplies into actual combat zones. The Air Transport Command and the Naval Air Transport Service engaged in a more far-reaching domestic and international transportation of personnel and cargo.

There were three principal tasks for the ATC. Its Ferrying Division delivered to the Allies of

the United States under Lend-Lease agreements. Planes which were ferried were serviced by the Air Service Command in ATC hangars. The Ferrying Division included the Women's Auxiliary Ferrying Squadron (WAFS) which was limited to domestic ferrying operations. (2) In the United States, with the cooperation of commercial airlines under contract to the War Department, the ATC conducted a Transition Transport Training Program, in which Army pilots who were graduates of flying schools maintained by the Flying Training Command were given specialized "transition training" for the operation of various types of transport planes. (3) The ATC served as the agency of the War Department for the aerial transportation of cargo, personnel, and mail both in the United States and overseas. For this purpose, it established and maintained air routes and bases wherever necessary.

Among the routes maintained by the ATC were: (1) the North Atlantic route from the northeastern coast of the United States to the United Kingdom, (2) the route from Miami across the South Atlantic to North Africa, (3) another trans-African route to the Middle East, (4) a route from San Francisco to Hawaii and thence down the chain of Pacific islands to Australia, (5) a route to Alaska, and (6) a route to Latin America. In addition, military air transport in northwestern Canada was largely in the hands of the ATC. The ATC operated fleets of planes over 100,000 miles of transport routes. Many of these routes were extended month by month as the requirements of the fighting front expanded. Over several of the air routes in various quarters of the globe, the ATC established the first regular scheduled air service.

Air cargo for ATC transport was prepared by the Air Service Command, which repacked goods purchased from manufacturers so as to conserve weight and space and marked each package with a color indicating destination which might be in any part of the world from Kiska to Karachi. The Air Service Command also held cargo ready for air transport in warehouses on ATC flying fields.

Much of the service of the ATC was carried on by converted passenger planes taken over from the commercial airlines and by converted bombers. Some of the planes were operated by Army pilots and others by airline personnel who wore the uniform of the ATC. Within the Western Hemisphere, the ATC flew more than one million tons of cargo each week. The amount of cargo flown across the Atlantic and the Pacific was a military secret. Losses in the ATC never rose more than 1 per cent in any month of 1943. Attempts of Japanese air forces to interfere with the Pacific routes of the ATC were unsuccessful.

The principal value of wartime air transport lay not only in the bulk of cargo carried but also in the rapidity with which the planes could complete each mission. Large equipment like light tanks and jeeps were transported across the ocean by air only in cases of emergency. Even in combat zones such objects were seldom carried by planes. Ordinarily, the heaviest freight by air was airplane engines. Speed was the chief goal. A report by the Office of War Information disclosed the fact that in 1943 an ATC plane made a record flight from Australia to California in 33 hours and 27 minutes. Medical supplies and blood plasma, critically needed, were flown to combat zones in the Pacific area with great dispatch. A complete hospital was flown to Alaska in 36 hours.

The Naval Air Transport Service. Parallel to the ATC was the Naval Air Transport Service. The NATS

operated on a smaller scale and without a Ferrying Service. It operated several hundred planes including a number of flying boats over routes aggregating 50,000 miles. The largest of the flying boats was the spectacular Mars (Martin XPB2-MO1) which made its first war mission to Natal in Brazil in December, 1943. Navy transport planes were flown by former airline pilots or by graduates of Naval Aviation schools in transport flying.

The NATS maintained three basic routes, namely, Atlantic, West Coast, and Pacific divisions. The Atlantic Command, with headquarters at Patuxent River in Maryland, consisted of squadrons serving the Atlantic coasts and islands of North and South America. Its planes operated all the way from Argentina in Newfoundland southward to numerous bases in the United States and thence to Guantanamo, San Juan, Antigua, Santa Lucia (Trinidad), Natal, and Rio de Janeiro, and also to Portland Bight (Jamaica) and Coco Solo in the Canal Zone. The Atlantic Command also operated across the Atlantic to Europe and South Africa. The West Command, operating from headquarters at Alameda in California, maintained scheduled flying for the transcontinental service as well as services in Canada and Alaska. Pearl Harbor served as headquarters for the Pacific Command which operated daily services in the Pacific area, chiefly to Australia. In order to coordinate the ATC and the NATS, and to avoid duplication of operations, a joint Army-Navy Air Transport Committee met regularly in Washington.

Domestic Air Carriers. Before Pearl Harbor, 434 airplanes were operated on the commercial airlines of the United States. On Jan. 1, 1943, this number had been reduced to 256, of which 166 were flown within the United States on regular schedules. The other planes had been taken over by the armed services, either outright or to be operated for them by the airlines under contract.

The sharp reduction in the number of airplanes available for commercial use made it necessary to exercise a governmental control over air schedules. No schedule was permitted to continue in operation unless it could be shown to be essential for war transportation. The "service pattern" (the schedule of flights) was strictly regulated by the Civil Aeronautics Board at the request of the Army.

Commercial flying was the only form of passenger travel in 1943 which sold tickets on a priorities basis. Members of the armed forces and government officials traveling on government business came first. The remaining space was sold to other passengers.

In 1943, three all-cargo commercial flights were operated by American airlines on regular schedules. These were: (1) New York to Miami, (2) New York to Salt Lake City, and (3) the Canal Zone to Lima in Peru and thence to Buenos Aires. The latter was the first regular cargo flight under the American flag overseas.

For the fiscal year ending June 30, 1943, domestic air carriers flew 94,889,617 pay-mail miles, and 3,304,411 other revenue miles, making a total of 98,194,058 revenue miles. These carriers transported 2,833,484 revenue passengers a total of 1,734,723,169 revenue passenger miles. The cargo traffic was 56,792,837,525 mail pound-miles, 28,700,642,087 express pound-miles, and 5,670,012,429 excess baggage pound-miles. The revenue from passenger service was \$79,056,748; from express, \$8,472,463; and from excess baggage, \$1,334,265; making a total of \$90,478,833. The mail revenue was \$23,745,870. Operating expenses

were \$82,449,900; while the operating profit was \$31,774,803.

The air carrier safety statistics in scheduled domestic operations for the fiscal year 1943 were as follows: revenue miles flown, 98,194,058; total number of major and minor accidents, 25; total number of fatal accidents, 2; revenue number of miles flown per major and minor accident, 3,927,762; revenue miles flown per fatal accident, 49,097,029; passenger fatalities, 22; pilot fatalities, 2; and crew fatalities other than pilots, 5. In other words, the percentage of passengers fatally injured was 0.0008.

Civil Aeronautics Administration. The Federal Airways System, under the jurisdiction of the Civil Aeronautics Administration in the U.S. Department of Commerce, supervised the operation of 35,000 miles of air routes over which 85 per cent of the traffic was military. With a personnel of 5,120, the CAA airport program in 1943 increased the number of landing fields from 660 to 900. The cost of the establishment and operation of all airways in 1943 was \$33,627,001. There were 270 intermediate fields, 2,206 beacon lights, 97 combined broadcast and radio range stations, and 184 radio range stations. For the fiscal year 1943, the Civil Aeronautics Administration issued approvals for new types of 8 aircraft, 2 engines, 22 propellers, 3 appliances, and 15 special approvals. It also issued approvals for new models of old types of 8 aircraft, 15 engines, 30 propellers, 21 appliances, and 84 special approvals. The CAA inspected 16,882 aircraft for airworthiness certificates and 1,464 flying and ground schools for air agency certificates. It examined 759 airline pilots for original certificates and 606 airline pilots for instrument rating.

In December, 1943, there were 144 ground schools and 295 flight schools in War Training Service. There were 4,875 flight instructors and 1,197 ground instructors, with 18,570 trainees in training. The number of training aircraft was 7,588.

Postwar Air Policy. Increasing attention was centered on postwar air policy. In meeting the needs of military air power, American aviation had become in 1943 a twenty billion dollar industry, employing two and a half million people. This expansion was in sharp contrast to the automobile industry which in its peak year, 1941, produced \$3,700,000,000 worth of cars. While extravagant claims were often made for aviation as a business in the postwar era, it was obvious that the manufacture of aircraft would need be enormously curtailed.

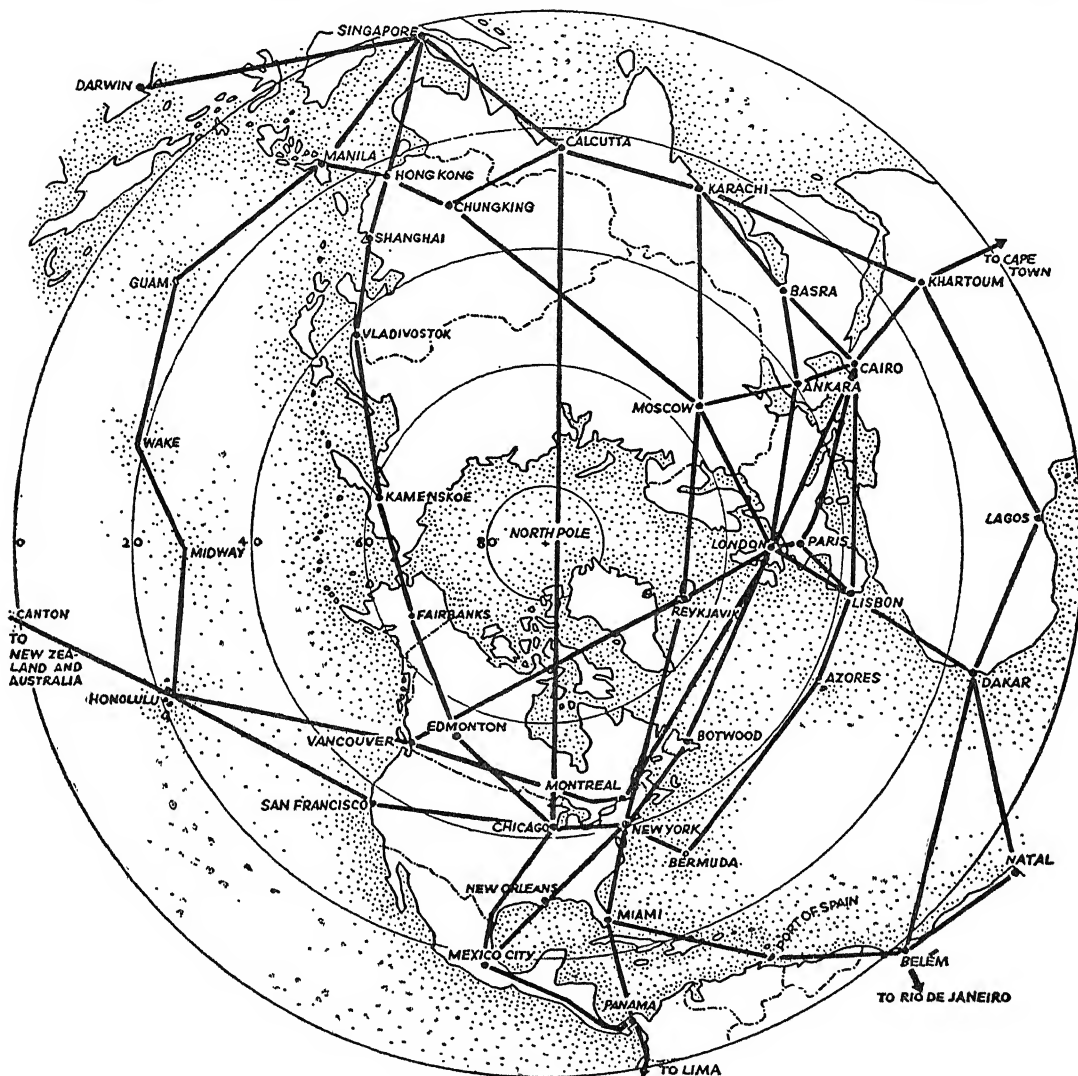
In the international field there was much discussion over the expected competition between the American, British, Dutch, Swedish, Spanish, and Russian airlines and over the need for some international agreement. In the United States, the problem was studied by two governmental agencies, namely, the Civil Aeronautics Board and the Interdepartmental Committee on International Air Policy initiated by the Department of State. At the same time it was widely suggested that the problem of international aviation should be the subject of a special United Nations conference convened before the termination of the war. It was understood that at the Quebec conference in August President Roosevelt and Premier Churchill agreed that an international air conference would be held sometime in the future.

Within the United States, the question of government versus private ownership of airlines in the postwar era was partly answered by General Arnold, who in June informed airline executives

that the Army had no intention of operating the world routes of the Air Transport Command after the war. In October, President Roosevelt stated that he opposed government ownership.

Another problem concerned the "chosen instrument" versus competition by several national or international systems. Long before the war, leading air powers had tended to place international aviation under a national monopoly. The British Government gave the British Overseas Airways

Corporation the exclusive right to operate British airlines overseas. Germany gave a monopoly to the Deutsche Lufthansa; France to Air France; Japan to Dai Nippon; Italy to Ala Littoria and the Netherlands to KLM (Royal Dutch Airways). All aviation in Soviet Russia was a monopoly. By the year 1943, it was clear that all states with great aerial interests, with the exception of the United States, expected to use "chosen instruments" in securing their respective shares in postwar inter-



INTERNATIONAL AIR ROUTES

Routes shown on this map include prewar, wartime, and possible postwar services. Distances given below are for routes shown on the map, and are approximate; where there are several routes between two points the distance for the shortest is given. All distances are in statute miles.

New York-London	3,400	Chicago-Singapore	10,000	London-Cairo	2,200
New York-Moscow	4,600	Chicago-Calcutta	8,000	London-Cape Town	7,000
New York-Mexico City	2,100	Vancouver-Sydney	7,800	London-Karachi	4,000
New York-Rio de Janeiro	5,300	Vancouver-London	4,800	London-Darwin	9,000
San Francisco-Auckland	6,800	Montreal-London	3,200	Moscow-Karachi	2,600
San Francisco-Manila	8,000	London-Moscow	1,600	Moscow-Chungking	3,700

[Map from Howard P. Whidden, Jr., "New Horizons in International Air Transport," *Foreign Policy Reports*, July 1, 1943. Distances compiled by Ona K. D. Ringwood.]

national air traffic. In the United States, proposals were made that the Federal Government adopt the same policy.

Previous to World War I there had been a tendency on the part of the United States to favor the expansion of the American-owned Pan-American Airways to the exclusion of all other American airlines in the foreign field. In 1940, this tendency was reversed when the Civil Aeronautics Board granted a certificate to the American Export Lines, Inc., to operate a commercial route to Portugal. On July 15, presidents of American airlines, speaking through Samuel Solomon, president of the Northeast Airlines, issued a statement indicating the desire of each of these airlines to enter the overseas transport field. They proposed open competition. The American Export Lines, Inc., proposed regulated competition, while the United Airlines frankly called for the pooling of all American resources in foreign air traffic.

The year 1943 witnessed considerable discussion over the problem of freedom of the air. There was apprehension that the Interdepartmental Committee on Aviation expected to pursue a radical policy in promoting freedom of the air. Complete aerial freedom would permit foreign airlines not only to load and unload passengers and freight at American airports but also to carry passengers and cargoes between airports in the United States. In September, L. Welch Pogue, chairman of the Civil Aeronautics Board, proposed an international understanding that would permit all airlines to fly across foreign territory to their commercial outlet in such territory for the discharge of passengers and cargo. In October, the Chamber of Commerce of the United States issued a Statement of Policy on International Transport. The tenth recommendation read: "We favor the establishment by treaty of the right for the commercial planes of all countries to fly over the territory of other countries and to land for fuel, repairs, or emergencies. This right, called the right of commercial transit, does not include the right to discharge or take on passengers or cargo, which right, if granted, should be on the basis of agreement with the governments concerned or procedure established by them." In March, Vice-President Henry A. Wallace advocated a complete internationalization of air systems or a network of globe-circling airways operated by the air arm of the United Nations.

On April 7, the Civil Aeronautics Board authorized five foreign airlines in the Caribbean to fly into Miami. Of these airlines, the KLM and the Aereo Inter-Americano (controlled by American and Cuban interests) established scheduled routes.

See GEOLOGICAL SURVEY (for piloting maps); PSYCHOLOGY under *Psychology and Aviation*; RAILWAYS (for freight competition); ROADS AND STREETS (for landing strips); STATE LEGISLATION under *Aviation*; METEOROLOGY; PAN AMERICANISM.

Bibliography. Among the books on the history of aviation published in 1943 were Archibald Black, *The Story of Flying* (New York); R. E. Byrd, *Little America* (New York, revised edition); Harper Harper, *Man's Conquest of the Air* (London); Hauptmann Herman, *The Luftwaffe; Its Rise and Fall* (New York); Fred O. Kelly, *The Wright Brothers* (New York); Isaac Don Levine, *Mitchell: Pioneer of Air Power* (New York); John Milbank, *First Century of Flight in America* (Princeton); Capt. E. V. Rickenbacker, *Seven Came Through* (New York); J. E. G. R. Williams, *Aircraft Woman Grey* (London). Books on military aviation included Gen. H. H. Arnold and I. O. Eaker, *This Flying Game* (New York); E. O. Barr, *Flying Men and Medicine* (New York); Kenneth Ayling, *Combat Aviation* (New York) and his *Wildcats in Casablanca* (Boston); Charles D. Chandler and Frank P. Lahm, *How Our Army Grew Wings* (New York); Henry Coffin and W. L. River, *Malta Story* (New York); Thomas

Collins, *Flying Fortress* (New York); D. C. Cooke, *War Planes of the Axis* (London); Francis Vivian Drake, *Vertical Warfare* (New York); Ted Lawson, *Thirty Seconds over Tokyo* (New York); S. Mims, *Chennault of the Fighting Tigers* (New York); Col. R. L. Scott, *God Is My Co-pilot* (New York); W. L. White, *Queens Die Proudly* (New York); William Winter, *War Planes of All Nations* (New York). Political and economic aspects of aviation were treated in William A. M. Burden, *The Struggle for Airways in Latin America* (New York); Cy Caldwell, *Air Power and Total War* (New York); A. R. Hager, *Frontier by Air* (New York); Burnet Hershey, *The Air Future* (New York); H. L. Smith, *Airways: History of Commercial Aviation in the United States* (New York). Among a large number of technical treatises on aircraft should be noted Col. C. C. Carter, *Simple Aerodynamics and the Airplane* (New York); C. H. Chatfield, C. F. Taylor and S. Ober, *The Airplane and its Engine* (New York); J. P. Connelly, *Technique of Production Processes* (New York); M. F. Eddy, *Aeronautic Radio* (New York); Assen Jordanoff, *Safety in Flight* (New York); C. B. Millikan, *Aerodynamics of the Airplane* (New York); L. R. Parkinson, *Aerodynamics* (New York) and his *Airplane Design* (New York); N. A. V. Piercy, *Aerodynamics* (London); D. H. Surgeoner, *Aero-Engines* (New York); E. P. Warner, *Airplane Design* (New York); K. D. Wood, *Technical Aerodynamics* (New York). Some of the books on air navigation were F. F. Crossley, *First Course in Air Navigation* (New York); J. E. O. Glidden and E. C. Hedges, *Navigation for Air-Crews* (London); C. H. McIntosh, *Radio Navigation for Pilots* (London); P. V. H. Weems, *Air Navigation* (New York). Among the annuals were *The Model Plane Annual, 1943*, edited by David C. Cooke and Jesse Davidson (New York) and *The Aviation Annual of 1944* edited by Reginald M. Cleveland and Frederick P. Graham (New York). Government reports included the *Annual Report of the Civil Aeronautics Board, 1943* (Washington); Office of War Information, *Report on War Transport* (Washington). The U.S.A.A.F. VIII Bomber Command's first year over Europe was told in *Target: Germany*.

KENNETH COLEGROVE.

AFGHANISTAN. A kingdom in central Asia. Area, about 251,000 square miles; population, variously estimated at 7,000,000 to 12,000,000. Estimated populations of the chief towns: Kabul (capital), 80,000; Kandahar, 60,000 (with suburbs); Herat, 50,000; Mazar-i-Sharif, 30,000. Persian, Pashto, and Turki are the principal languages. All but a few of the inhabitants are Moslems of the Sunni sect. There are some 20,000 mullahs (priests) who wield enormous power, including the administration of justice and a large measure of control over education. Schools in 1941 included 130 primary, 4 secondary, and 3 military schools. Kabul University, established in 1932, has medical, chemical, and law faculties. There are a few other technical, art, commercial, and medical colleges.

Defense. One-eighth of the male population of each city and village must serve two years in the army and eight years in the reserve. There is also a regular army recruited by life-long enlistment. The normal peace strength of the army is 90,000 men, including the small air force of 300 men with some European-trained pilots. Numerous tribesmen armed with modern rifles are available for service in time of war.

Production. Agriculture and stock raising are the chief occupations, the main products being cereals, fruits, vegetables, cotton, wool, hides and skins, and meat from the native fat-tailed sheep. The mineral resources include iron, copper, lead, gold, silver, lapis lazuli, coal, and petroleum, but there is little production. There are state-owned factories at Kabul, Kandahar, and elsewhere for the manufacture of arms, ammunition, boots, military clothing, furniture, matches, buttons, leather, soap, cotton goods, and wool products. The total national income is estimated at 250,000,000 afghanis.

Foreign Trade. Commerce is mainly with India, the Soviet Union, and Iran. The chief exports are fruits, nuts, timber, spices, cotton carpets, wool, and skins. Imports in 1938 were valued at 172,000,000 afghanis and exports at 140,000,000 (4 afghanis equalled 1 rupee, or \$0.30). Cotton textiles,

machinery, gasoline, kerosene, sugar, automotive equipment, and tea are the main imports.

Communications. Afghanistan has no railways and practically no navigable rivers. Four thousand miles of roads are suitable for motor transport in dry weather, and trucks are increasingly replacing pack animals as the chief means of transportation. An all-weather motor highway from Kabul to Peshawar, India, by a shorter and lower route was scheduled for completion in 1942. The other chief trade route to India is from Kandahar to the Indian railroad at Chaman. A 500-mile motor route from Stalinabad, Soviet Turkestan, was completed to Khorog on the Afghan border in 1941. There are telephones in most of the larger towns, telegraph lines connecting the cities, and five radio-broadcasting stations.

Government. Under the Constitution of Oct. 31, 1931, Afghanistan is a constitutional monarchy, with legislative power vested in the King, a senate of 43 members nominated for life, and a national assembly of 110 elected members. Actually the state consists of a loose confederation of warlike tribes under the patriarchal rule of the family controlling the government at Kabul. When the ruler dies or is driven out or assassinated, the commander of the Kabul garrison usually succeeds to the throne. Through the influence of his uncle, Shah Mahmud, the Minister of War, Mohammed Zahir Shah succeeded to the throne upon the assassination of his father, Mohammed Nadir Shah, in 1933. Mohammed Hashim Khan, another uncle of the King and the head of the ruling family, became Prime Minister and the real power behind the throne. The tribes are kept under control by the hostage system and the combined use of force, bribery, and diplomacy.

History. Herbert L. Matthews, a correspondent of *The New York Times*, visited Kabul from India in May, 1943, and sent out the first comprehensive account of conditions in Afghanistan that had been published for some years. He reported that the Afghan Government was holding firmly to its policy of neutrality. In cooperation with British authorities in the Northwest Frontier Province of India, it succeeded in maintaining peace among the turbulent tribes of the Afghan-Indian border, despite intrigues of the German, Italian, and Japanese diplomatic corps that remained in the country after the Afghan Government expelled nonofficial Axis nationals in 1941. According to Matthews, Afghan officials viewed the Anglo-Soviet occupation of Iran with apprehension. In both foreign and domestic policy they followed the lead of Turkey, seeking to modernize and westernize the country as rapidly as their scanty means and the powerful opposition of the mullahs would permit. However the warlike character of the border tribes and their inbred hostility to the British made it impossible for the Kabul authorities to adopt an openly pro-British attitude.

In Kabul Matthews found an American colony of 14 persons, of whom 10 were connected with the U.S. legation established in July, 1942, under a career diplomat, Cornelius Van H. Engert. The first Afghan Minister to the United States presented his credentials to President Roosevelt June 4, 1943. According to the *Times* correspondent, the American legation officials had a friendly reception in Afghanistan and had won favor by the gift of a jeep to the Minister of War and of a training plane to the small Afghan air force. Delivery of American trucks and spare parts also was promised. Effective October 13, the Afghan Government fixed the exchange rate for the U.S. dollar at 11.5528 afghanis (instead of 13.0472 afghanis).

A.F.L. American Federation of Labor. See **LABOR CONDITIONS** under *Union Movements*; **NATIONAL LABOR RELATIONS BOARD**.

AFRICA. A continent of the eastern hemisphere. Area, about 11,710,000 square miles (30,330,000 square kilometers). Population (Jan. 1, 1940, estimate), 157,330,000. See the separate articles on its countries and territories, such as **ALGERIA**, **EGYPT**, **ETHIOPIA**, **KENYA**, **MOROCCO**, **SOUTH AFRICA**, **UNION OF**; **TUNISIA**. Also see **WORLD WAR**.

AGRICULTURAL AGENCIES. For various government agencies listed under "Agricultural" see **AGRICULTURE**, **U.S. DEPARTMENT OF**. Also see **WAR FOOD ADMINISTRATION**.

AGRICULTURAL COOPERATION. During 1943 farmer cooperative associations in the United States made outstanding contributions to the successful prosecution of the war. Their millions of farmer members were enabled to increase food production, market crops economically, process huge volumes of foods for the tremendous military and other Government requirements, and conserve scarce transportation facilities.

All told, there are between 15,000 and 20,000 farmer-owned and farmer-controlled cooperative associations and mutual companies now operating in this country. Of this number, 10,450 are engaged primarily in marketing farm products, purchasing farm supplies, or performing related services. Mutual irrigation companies number approximately 2,500 and farmers' mutual fire insurance companies number about 1,900. In addition there are approximately 800 rural electric cooperatives and a larger number of farmer-owned telephone companies. Nearly a third of all the telephones now in use in American farm homes are provided by the farmers' own mutual companies. This service is furnished through more than 2,000 operating companies with switchboards and some 30,000 connecting lines. About 100 agricultural credit corporations associated with various types of cooperative organizations provide a discount service. Many of these are subsidiaries of operating associations.

Other activities performed by some cooperatives for their members include highway transportation, repairs, inspection, burial services, and services in cooperative rural hospitals and by cooperative health associations.

In addition there are many so-called "cooperative production activities" by farmers in connection with farm land and the production of crops and animals. Since much of this cooperation, however, is informal and not reported, any statistical evaluation of it is incomplete. Among such producer cooperatives are associations for carrying out soil conservation programs, such as terracing and drainage projects, associations for producing better strains of seed and insuring the production of high quality seed in quantity, associations for improving breeds of animals, and associations for solving cultural and harvesting problems. It is estimated that there are approximately 1,000 dairy herd improvement associations, 300 dairy-bull associations, 100 dairy-cattle artificial-breeding associations, 40 grazing associations, and 200 Indian cooperatives largely concerned with production problems. During the marketing season 1942-43, farmers increased their membership in their own cooperative marketing and purchasing associations to an estimated total of 3,850,000. In addition, it is estimated that at least one-half million more farmers patronize them without accepting the responsibilities of member-

ship. The cooperatives transacted an estimated dollar value of business amounting to \$3,780,000,000. This record-breaking total exceeded the business of the preceding year by \$940,000,000, practically a "billion-dollar increase" that was due in part to increased production and in part to higher price levels.

The following table shows the number of marketing associations in specified groups, and the number of purchasing associations, with estimated membership and dollar business for the 1942-43 marketing season:

FARMERS' MARKETING AND PURCHASING CO-OPERATIVES, 1942-43 MARKETING SEASON

Group	Associations	Estimated members	Estimated business
	Number	Number	\$1,000
Marketing:			
Dairy products.....	2,369	710,000	950,000
Grain, dry beans, rice....	2,358	400,000	700,000
Livestock, wool, mohair..	834	685,000	629,000
Fruits, vegetables, nuts..	990	213,000	525,000
Cotton and products....	539	235,000	167,000
Poultry, eggs.....	166	111,000	145,000
Miscellaneous.....	452	226,000	64,000
Total marketing.....	7,708	2,580,000	3,180,000
Purchasing.....	2,742	1,270,000	600,000
Total marketing and purchasing.....	10,450	3,850,000	3,780,000

By the close of 1943 at least 14 cooperative organizations were engaged in dehydrating fruits and vegetables. By dehydration not only are space, weight, and packaging materials saved in shipping, but foods are preserved with a minimum of spoilage. An outstanding contribution was made by the large cranberry canning cooperative, which more than doubled its dehydrating facilities to supply the Government in 1943 with two million pounds of the dehydrated product, which is over 90 per cent of the national total. With the tremendous growth in recent years in the production of dairy products by cooperatives, this group has been in the forefront of the expansion in dry milk production.

Another important field in which several cooperatives are taking a leading part is that of citrus concentrates. Along with this, these cooperatives have increased production of dried pulp feed and citrus molasses, which have been highly advantageous to the dairy industry.

The number of frozen food locker plants in the United States was increased in 1943 as rapidly as the War Production Board was able to approve priorities for materials for construction. By the end of 1943 between 5,300 and 5,500 were in operation. Farmers, it was estimated, were using about 75 per cent of this locker capacity. Over one-fifth of all farm families in the United States are now using lockers. One of the objectives of the Government in providing materials for both cooperative associations and private business concerns to establish such plants is to provide facilities for the preservation of locally grown foods which otherwise might be wasted or spoiled. Such plants also contribute to the food conservation program by savings in transportation and in metals and other critical materials.

For a more detailed discussion, see 1943 YEAR BOOK.

W. W. FETROW.

AGRICULTURE. Crop production in the United States in 1943 was 6 per cent less than in 1942 but nearly 5 per cent more than in any previous season. In comparison with the average of the five moderately favorable crop seasons, 1937-41, the

acreage of the principal crops harvested was up $4\frac{1}{2}$ per cent; yields per acre were up an average of 5 per cent and aggregate production of the 53 principal crops, including fruits, was up 9 per cent. Part of this 9 per cent increase over the five-year average was due to a slightly better than average growing season; to progressive improvement in farming practices, to changes in the Agricultural Adjustment program, to deferment of farm workers, and to prices and programs which encouraged farmers to buy more fertilizers and improved seed and plant larger acreages. Although these conditions helped to make the increase possible, producers faced shortages of skilled men, of supplies, and equipment, and vexatious delays from wet weather and floods.

Much of the credit for the increase must be given to the united efforts of farmers to push production toward the limits fixed by acres of land, hours of daylight, and human endurance. Farmers and their families worked more hours per week and more Sundays than in any year known to this generation. Much of the extra help available was unskilled, but farm operators worked more efficiently than ever before. Town people helped where they could. Imported workers, prisoners of war, soldiers on furlough, and city volunteers helped. Shortages of equipment, parts, gasoline, tires, and packages threatened breakdowns at times, but in the main, the tractors, harvesting machines, and trucks were kept rolling.

Production in 1943. The estimates for 1943 show record production of potatoes, beans, peas, soybeans, peanuts, rice, and various minor crops, including nuts, hemp, and some commercial vegetables, particularly snap beans, carrots, and lettuce. The orange crop on the trees was very promising and with average weather the production of oranges and of all citrus fruits as a group seemed likely to exceed past records. Crops or groups of crops which have been exceeded only a few times in past years include corn, barley, sorghums for grain, all grains as a group, all hay crops combined, and vegetables for processing. The list of crops that were not far from usual production, excluding drought seasons, included wheat, oats, tobacco, sweet potatoes, and various less important crops such as maple sirup, prunes, and cranberries.

Buckwheat was substituted for some oats that could not be planted in season and production of buckwheat was larger than in other years since 1934 but far below production in earlier decades. Sugar production was a little below average. While sugarcane for sugar showed the second highest production on record, the tonnage of sugar beets was lower than in any year since 1922. The cotton crop was smaller than usual but there was no shortage of supplies. About the only other crops that were materially below average in production were the deciduous fruits (apples, peaches, pears, apricots, and cherries) reduced chiefly by late frosts in the eastern half of the country, some seed crops affected by the weather, and rye and cowpeas which were extensively displaced by crops more in demand because of the war.

Much effort to increase food production was devoted to livestock; and the production of livestock and livestock products was exceptionally heavy. Aggregate production of sheep, cattle, hogs, poultry, eggs, and milk ran about 8 per cent above production in 1942, 31 per cent above production during the 1937-41 period, and more than 31 per cent higher than in any earlier year. Though the production of lamb and mutton was somewhat

smaller than in 1942, the production of beef and veal exceeded the 1942 total by 3 per cent or thereabouts, and the production of pork was 23 per cent higher.

Chicken production was near the record total of 4 billion pounds, and egg production probably exceeded 5 billion dozen. Production of milk for human consumption was nearly as large as in 1942, though increased use of milk in the fluid form entailed a drop of possibly 13 per cent in the production of cheese and evaporated milk. Ice cream production was down about 20 per cent from 1942, but butter production was up a little.

Livestock production had specially favoring circumstances; in fact an equally favorable combination happens rarely. After the drought years of the early 1930's, we had good crops from 1937 through 1941, and these laid the foundation for a progressive increase in numbers of cattle, hogs, sheep, and poultry. Range grass recovered and stocks of feed accumulated. The unprecedented harvest of 1942 added greatly to the accumulated feed supply. Production of grain in 1942 totaled 156 million tons—twice the production in the drought year 1934 and equal to one-fourth of the quantity usually produced in the whole world. Total crop production was 12 per cent greater than in any previous year. In consequence our stocks of grain, the highest in 20 years, increased in every State, and set the stage for maximum livestock production, the demand for which was meantime rising fast.

Farmers began 1943 with record numbers of livestock, record supplies of grain and hay, and record conditions. Prices of livestock were high and rising; the inventory values of cattle, hogs, and chickens on farms averaged the highest since the Civil War.

Farmers saved 74,050,000 spring pigs, or 22 per cent above the number saved in 1942 and 37 per cent above the number in any previous year. They appeared to be saving about 21 per cent more fall pigs than in 1942. In fact, the 88 million hogs that will be on farms January 1 will overtax the feed supply.

Milk production was slightly below the record output of 1942, but about 3 per cent greater than in any previous season; moreover, an increased proportion of it reached the market as whole milk. Production of sheep and lambs, though some 8 per cent below the 2,313 million pounds produced in 1942, should exceed the output for any year prior to 1941.

In the early spring, crop prospects seemed favorable because the western half of the country had an excellent supply of subsoil moisture and of water for irrigation. Then late frosts began to reduce prospects for fruits and early vegetables. May brought tremendous rains and floods from Oklahoma to Michigan, and continuously wet weather over a wide area. This delayed farm work, particularly the planting of corn and soybeans, but brought about a heavy growth of hay crops. June brought more floods in the lower Missouri Valley but also brought good rains in the spring wheat States and enough dry weather east of the Mississippi to permit farmers in most areas to catch up with late planting and haying. July and August were mostly hot and dry; pastures and most late crops suffered and severe droughts developed in two areas—one centering in Arkansas and extending into surrounding States and the other extending from New Jersey into Virginia.

The acreage of crops harvested in 1943 was

about 347,500,000 and exceeded that harvested in 1942 by more than 9 million acres or nearly 3 per cent. The increase was accomplished under difficulties, for wet weather prevented planting some acreage, not all of the acreage destroyed by the floods could be replanted, and there were some losses from drought. The total area of crops lost was about 13,500,000 acres, nearly 2,000,000 more than in 1942, slightly more than in 1941, but substantially less than in any of the years from 1933 through 1940.

ACREAGE AND PRODUCTION OF FARM CROPS IN THE UNITED STATES IN 1942 AND 1943
(Bushels except as otherwise indicated)

Crop	Year	Acres Harvested	Acre Yield	Production
Corn.....	1943	94,790,000	32.5	3,076,159,000
	1942	89,021,000	35.2	3,131,518,000
Wheat.....	1943	50,554,000	16.5	836,298,000
	1942	49,200,000	19.8	974,176,000
Oats.....	1943	38,449,000	29.8	1,143,867,000
	1942	37,878,000	35.6	1,349,547,000
Barley.....	1943	14,702,000	21.9	322,187,000
	1942	16,850,000	25.5	429,167,000
Rye.....	1943	2,777,000	11.1	30,781,000
	1942	3,860,000	14.9	57,673,000
Buckwheat...	1943	505,000	17.5	8,830,000
	1942	375,000	17.7	6,636,000
Flaxseed.....	1943	5,867,000	8.9	52,008,000
	1942	4,424,000	9.3	41,053,000
Rice.....	1943	1,500,000	46.7	70,025,000
	1942	1,450,000	44.5	64,549,000
Grain sorghum...	1943	6,637,000	15.5	103,168,000
	1942	5,871,000	18.2	106,770,000
Cotton lint...	1943	21,874,000	125.2	2,114,780,000
	1942	22,602,000	127.2	2,128,170,000
Cottonseed...	1943	.....	.....	5,116,000
	1942	.....	.....	5,717,000
Hay.....	1943	74,417,000	1.34	99,543,000
	1942	72,649,000	1.45	105,295,000
Beans, dry edible.....	1943	2,465,000	18.4	421,799,000
	1942	1,929,000	19.8	383,935,000
Peas, dry field.	1943	795,000	13.7	10,870,000
	1942	494,000	15.0	7,408,000
Soybeans for beans.....	1943	10,820,000	18.1	195,762,000
	1942	10,008,000	18.7	187,155,000
Cowpeas for peas.....	1943	947,000	5.1	4,841,000
	1942	1,310,000	5.6	7,283,000
Peanuts.....	1943	3,940,000	16.8	66,160,000
	1942	3,439,000	16.3	56,035,000
Potatoes.....	1943	3,322,000	10.2	33,884,000
	1942	2,706,000	10.6	28,789,000
Sweet potatoes....	1943	889,000	81.7	72,772,000
	1942	709,000	92.4	65,508,000
Tobacco.....	1943	1,462,000	19.0	27,378,000
	1942	1,377,000	19.2	26,448,000
Sugar beets...	1943	552,000	11.8	6,516,000
	1942	954,000	12.2	11,674,000
Sugar cane....	1943	322,000	21.4	6,904,000
	1942	317,000	18.4	5,840,000
Sugar cane for sirup....	1943	129,000	14.9	1,920,000
	1942	119,000	15.6	1,861,000
Sorgo sirup...	1943	205,000	57.4	11,760,000
	1942	222,000	62.0	13,772,000
Maple sirup...	1943	9,281,000	.....	2,555,000
	1942	9,847,000	.....	2,915,000
Maple sugar...	1943	9,281,000	.....	1,578,000
	1942	9,847,000	.....	2,654,000
Broom corn...	1943	234,000	12.7	2,982,000
	1942	230,000	13.9	3,198,000
Hops.....	1943	33,000	12.9	422,970,000
	1942	35,000	10.1	351,530,000

¹ lb. ² bales. ³ tons. ⁴ 100-lb. bags. ⁵ gallons. ⁶ trees tapped.

Fruit production in the season of 1943 (including citrus fruits for the harvesting season of 1943-44) was the smallest since 1938, and 12 per cent smaller than the record-high of 1942. Yield per acre of 10 major fruits was 11 per cent below that of 1942, but a fourth larger than the 1923-32 average. Combined production of four tree nuts (walnuts, pecans, almonds, and filberts) was slightly above the previous high-record year of 1941 and 14 per cent larger than in 1942.

Crops of apples, peaches, pears, cherries, apricots, and strawberries were exceptionally small. Winter and spring injury by freezes and unfavorable weather during pollination were largely responsible. Partially offsetting these small crops

were the largest crop of grapes on record, large crops of plums, prunes, and figs, and a record-high prospective tonnage of citrus fruits. Production of oranges for the 1943-44 season was the largest of record. The grapefruit outlook was for a crop second only to the record crop of 1942, and lemon production promised to be the third largest crop of record.

Tonnage of important commercial truck crops, for marketing fresh and for processing, was about 10 per cent less than in 1942, but was greater than for any previous year except 1941. Both fresh market and processing crops showed substantial reductions from 1942. Aggregate production of 6,508,000 tons for the fresh market in 1943, while less than for any year since 1937, was only 7 per cent less than the 7,013,000 tons for 1942, and was about 4 per cent greater than the 10-year (1932-41) average of 6,275,000 tons. Tonnage of 11 crops for processing in 1943 was 4,981,000 tons—14 per cent less than in 1942, but 50 per cent above the 1932-41 average and higher than for any other year except 1941. The reduction from 1942 was offset partially by vegetable production in Victory gardens.

Production of the six principal grass and clover seeds was about 405,000,000 pounds, the lowest since 1937, but much above all earlier years except 1935. The 1943 crops of alfalfa seed and red clover seed were larger than in 1942 while alsike clover, sweetclover, lespedeza, and timothy were smaller. The sweet clover seed crop was particularly small compared to recent years. Because of restricted imports, increased domestic needs, and demand for export under Lend-Lease, prices of these crops have been relatively favorable, and the acreage saved for seed has been relatively high in recent years.

Crop yields in 1943 were mostly lower than in 1942 but averaged a little higher than in any of the years 1937-41 and much higher than in earlier years. Of all principal crops except vegetables, the aggregate yields were 124 per cent of the 1923-32 (predrought) average, compared with 136 per cent in 1942 and 114 to 122 per cent in the previous five years. Potatoes gave an average yield of 140 bushels per acre, the highest recorded. Corn yielded 32.5 bushels per acre and spring wheat 18.5 above the yields in years previous to 1942. Cotton, tame hay, soybeans, and tobacco yields were exceeded only in 1942 and a few other years. Yields of many other crops were in line with the general upward trend.

Feed crop production in 1943 showed a large total, but was not evenly distributed geographically and was not large in proportion to the numbers of livestock and poultry on the farms. Production of the four feed grains totaled 115 million tons, a quantity exceeded only in 1942 and 1920. The supply per unit of livestock on hand, though less than in any other year since the drought was not far from the average during earlier decades. It will suffice for normal feeding if closely utilized. The hay crop was the second largest produced, and was sufficient for normal feeding per unit of livestock.

The corn crop, which was the second largest on record, totaled 3,076,159,000 bushels, and the acreage planted to corn was the largest since 1937, despite generally adverse weather at planting time. (See CORN.) The estimated production of all wheat in 1943 was 836,298,000 bushels, 14 per cent less than the 1942 crop but 13 per cent greater than the 10-year (1932-41) average; the yield per acre of 16.5 bushels was 22 per cent

above the 10-year average. (See WHEAT.) The 1,143,867,000 bushels of oats produced was 12 per cent more than the 10-year average, 1932 to 1941, though 15 per cent below last year's bumper crop. (See OATS.) The 1943 barley production of 322,187,000 bushels was one-fourth less than the record crop produced last year but almost a third larger than the 10-year average. (See BARLEY.) The acreage of rye harvested for grain was below that of any year since 1936, 16 per cent below the 10-year average. Rye could not meet the competition of more profitable war crops. (See RYE.)

The production of buckwheat, estimated at 8,830,000 bushels, is substantially above average, and is the largest since 1934. Production in 1942 was 6,636,000 bushels, and the 10-year (1932-41) average is 7,029,000 bushels. The largest acreage since 1931 was planted, and a total of 505,000 acres was harvested—well above the 375,000 acres harvested in 1942, and the 10-year average of 424,000 acres. The acreage expansion was due for the most part to the late wet spring which to some extent prevented planting the intended acreage of the usual feed crops.

Flaxseed production, over 52 million bushels, was 11 million bushels larger than the 1942 record crop. (See FLAXSEED.) Flax fiber production of 20,000 tons was only about half as large as the 1942 crop of 37,000 tons. All of the tonnage was produced in Oregon. A sharp reduction in both acreage planted and yield per acre is responsible for the small crop. Production of 70,025,000 bushels of rice also exceeded the previous record set in 1942, by about 8 per cent, and was about 48 per cent above average. (See RICE.)

A crop of 103,168,000 bushels of sorghums for grain and seed was harvested, from 6,637,000 acres of sorghums of all kinds grown in 1943. This production was slightly less than in 1942, but about 68 per cent above the average. While acreage harvested for grain was larger than in 1942, yields were much lower. All sorghums for silage amounted to 5,011,000 tons from 954,000 acres, compared with 6,677,000 tons in 1942 and the average of 3,921,000 tons. All sorghums for forage totaled 10,993,000 tons from 8,414,000 acres, considerably below the 13,564,000 tons in 1942, but slightly above average forage production. The 1943 hay crop of nearly 100 million tons was the second largest on record and only 5 per cent smaller than the record 1942 crop. (See HAY.)

A record crop of dry field peas was produced in 1943. Production was about 10,870,000 bags (100 lb. uncleaned), or 47 per cent above the 1942 crop of 7,408,000 bags and more than four times the 10-year (1932-41) average of 2,617,000 bags. Included in the estimate are seed peas and peas planted specifically for food and canning peas which were allowed to mature; Austrian Winter peas are not included. The increase in production is due largely to a greater war need for this important food crop. The acreage was increased greatly in the Pacific Northwest, where most of the crop is produced. The yield per acre of 1,367 pounds was not as good as that obtained in 1942, because of poorer growing weather early in the season, a shorter growing season in some areas and a shift to lower yielding varieties in others.

The 1943 crop of dry edible beans was the largest of record. Estimated production of 21,799,000 bags (of 100 pounds each, uncleaned), was nearly 15 per cent more than the 1942 crop and about 52 per cent more than the 10-year (1932-41) average of 14,325,000 bags. Production has been increasing gradually since 1934, but

the increase compared with 1942 was largely the response to greater war needs. The production of soybeans (q.v.), at 195,762,000 bushels, was 5 per cent larger than the revised estimate for the 1942 crop of 187,155,000 bushels.

Production of 2,561,610,000 pounds of peanuts was estimated from the acreage picked and threshed. Though somewhat lower than early estimates, the production was the largest of record and exceeded the previous record (1942 crop) by about 16 per cent. Acreages well above those of 1942 were planted to peanuts in each of the three important areas. Growing conditions were good in the Southeastern area and harvesting of the large crop was completed without serious difficulty. The crop was of high quality.

Post-harvest acreage and yield surveys pointed to a 1943 tobacco crop of 1,403,275,000 pounds. (See TOBACCO.) Mainly as a result of severe drought, the Maryland tobacco crop was the smallest on record.

The cotton crop was estimated at 11.5 million bales on 21.9 million harvested acres. The acreage harvested was smaller than in any other year during the present century. Early season prospects

were for an all-time record yield for the United States, but excessive drought during August and early September resulted in considerable deterioration of the crop, especially in Tennessee, Arkansas, Oklahoma, and Texas. Some further reduction occurred in the northern fringe of the Cotton Belt as the result of killing frosts during mid-October. Production of cottonseed was calculated at 5.1 million tons, compared with 5.7 million tons produced in 1942. If the percentage of the 1943 cottonseed crop delivered to oil mills is comparable to that for the 1942 crop, production of crude oil from this source should amount to about 1¼ billion pounds. Cottonseed is one of the most important sources of greatly needed vegetable oil. (See COTTON.)

Preliminary reports from sugar beet factories indicated production of 6,516,000 tons in 1943. This total would be about 44 per cent less than the near-record crop produced last year, and the smallest tonnage produced since 1922. Contributing to the decrease were such factors as unfavorable weather at planting time, uncertainty as to the labor situation, discouragement brought about by the difficulties that were experienced in har-

VALUE OF AGRICULTURAL PRODUCTION AND ACREAGE, BY STATES
[U.S. Department of Agriculture]

State	Farm Income, Jan.- Sept., 1943 ^a		Acreage ^b		Principal Crops
	Cash Payments	% gain ^c	1942	1943	
Ala.....	\$ 114,081,000	27.2	6,722,000	6,811,000	Cotton lint, corn, peanuts, cottonseed, hay, sweet potatoes.
Ariz.....	90,128,000	39.4	784,000	754,000	Cotton lint, truck crops, hay.
Ark.....	165,307,000	12.0	6,606,000	6,347,000	Cotton lint, corn, cottonseed, rice, hay, soybeans, truck crops.
Calif.....	1,068,358,000	9.7	6,210,000	6,007,000	Truck crops, oranges, hay, grapes, cotton lint, peaches, potatoes, barley, dry beans, lemons, prunes, rice, walnuts, pears, apricots, wheat, apples, olives, flaxseed.
Colo.....	198,307,000	37.2	5,957,000	6,232,000	Wheat, potatoes, hay, corn, truck crops, barley, dry beans.
Conn.....	73,672,000	23.1	369,000	374,000	Tobacco, hay.
Del.....	63,612,000	64.3	378,000	383,000	Oranges, truck crops, grapefruit, corn, tobacco.
Fla.....	208,225,000	48.8	1,208,000	1,229,000	Cotton lint, corn, peanuts, tobacco, cottonseed, hay, peaches, sweet potatoes, velvet beans, oats, truck crops.
Ga.....	176,496,000	30.4	8,366,000	8,455,000	Potatoes, hay, wheat, barley, dry beans, peas.
Ia.....	132,831,000	17.3	3,114,000	3,241,000	Corn, soybeans, oats, hay, wheat, truck crops.
Ill.....	808,334,000	26.1	18,804,000	19,527,000	Corn, soybeans, hay, oats, truck crops, wheat, potatoes.
Ind.....	477,173,000	27.6	10,376,000	10,695,000	Corn, oats, soybeans, hay, potatoes, flaxseed, wheat.
Iowa.....	1,144,167,000	34.5	21,310,000	21,855,000	Wheat, corn, oats, hay, forage sorghums, grain sorghums, barley.
Kan.....	517,279,000	28.7	21,652,000	22,404,000	Tobacco, corn, hay, wheat.
Ky.....	255,737,000	43.1	5,559,000	5,600,000	Cotton lint, rice, corn, sugar cane, cottonseed, sweet potatoes, hay.
La.....	122,347,000	25.7	4,095,000	4,120,000	Potatoes, hay.
Me.....	79,283,000	31.5	1,234,000	1,212,000	Truck crops, corn, tobacco, hay, wheat.
Md.....	127,529,000	34.3	1,627,000	1,624,000	Hay, cranberries.
Mass.....	101,641,000	26.6	438,000	435,000	Corn, hay, oats, dry beans, truck crops, potatoes, wheat, apples, soybeans, barley, cherries.
Mich.....	346,856,000	26.1	7,793,000	7,478,000	Corn, oats, hay, flaxseed, barley, wheat, potatoes, truck crops, soybeans.
Minn.....	618,079,000	25.8	18,475,000	18,658,000	Cotton lint, corn, cottonseed, hay, sweet potatoes.
Miss.....	173,328,000	33.6	7,120,000	7,018,000	Corn, cotton lint, hay, oats, soybeans, wheat, cottonseed.
Mo.....	449,230,000	27.1	12,102,000	12,582,000	Wheat, hay, oats, barley, flaxseed.
Mont.....	130,301,000	40.9	6,920,000	7,380,000	Corn, wheat, oats, hay, potatoes.
Neb.....	469,515,000	44.5	19,200,000	20,311,000	Hay.
Nev.....	17,435,000	30.7	463,000	466,000	Hay.
N.H.....	27,849,000	18.8	380,000	372,000	Truck crops, potatoes, corn, hay.
N.J.....	152,869,000	18.9	781,000	794,000	Cotton lint, hay.
N.M.....	54,163,000	42.6	1,696,000	1,542,000	Truck crops, potatoes, corn, apples, oats, wheat, dry beans.
N.Y.....	448,656,000	19.4	6,575,000	6,297,000	Tobacco, cotton lint, corn, peanuts, cottonseed, wheat, sweet potatoes, soybeans.
N.C.....	268,530,000	10.5	6,405,000	6,534,000	Wheat, barley, oats, flaxseed, corn, potatoes, hay, rye.
N.D.....	273,471,000	68.3	17,936,000	19,478,000	Corn, soybeans, wheat, hay, oats, truck crops, potatoes, apples, tobacco.
Ohio.....	496,119,000	21.7	10,245,000	10,505,000	Cotton lint, wheat, corn, hay, cottonseed, oats, forage sorghums, peanuts, grain sorghums, barley.
Okla.....	262,243,000	12.4	12,720,000	12,387,000	Hay, wheat, potatoes, truck crops, pears, barley, hops, oats.
Ore.....	157,535,000	19.6	2,613,000	2,654,000	Corn, hay, potatoes, wheat, oats, truck crops, apples, tobacco.
Penn.....	360,102,000	21.3	5,818,000	5,768,000	Cotton lint, tobacco, corn, cottonseed, hay, oats, sweet potatoes, truck crops, peaches.
R.I.....	12,062,000	5.9	50,000	50,000	Corn, wheat, barley, oats, hay, flaxseed, rye.
S.C.....	122,581,000	10.4	4,878,000	4,867,000	Corn, cotton lint, hay, tobacco, cottonseed, wheat.
S.D.....	238,450,000	52.6	15,261,000	15,838,000	Cotton lint, corn, cottonseed, wheat, grain sorghums, forage sorghums, rice, peanuts, truck crops, hay, grapefruit, oats.
Tenn.....	183,180,000	29.4	6,560,000	6,776,000	Hay.
Tex.....	736,930,000	24.7	26,414,000	28,921,000	Hay.
Utah.....	71,506,000	34.7	1,122,000	1,115,000	Tobacco, corn, hay, peanuts, apples, wheat, potatoes, truck crops.
Vt.....	55,730,000	18.8	1,027,000	1,003,000	Wheat, apples, hay, peas, pears, potatoes, truck crops, barley, hops.
Va.....	167,010,000	37.2	3,858,000	3,905,000	Corn, hay.
Wash.....	245,718,000	23.7	3,757,000	4,103,000	Corn, hay, oats, truck crops, potatoes.
W.Va.....	53,390,000	23.0	1,410,000	1,452,000	Hay.
Wis.....	515,325,000	23.7	9,976,000	10,212,000	
Wyo.....	51,899,000	7.0	1,716,000	1,542,000	

^a Exclusive of Government payments. ^b 52 principal crops. ^c % gain over 1942.

vesting the 1942 crop, and keen competition from other crops requiring less hand labor. The production of sugarcane sirup of 19,240,000 gallons is somewhat more than was produced in either of the past two years. The ill effects of dry weather in some sections during the growing season were largely offset by a mild late fall. Sorgo sirup production on the other hand, at 11,760,000 gallons, is about 2,000,000 gallons below the production of last year and only 81 per cent of the 10-year average. In 1942 sorgo for sirup was grown on 8,000 acres for conversion into industrial alcohol. The production of sugarcane to be used for sugar and seed is estimated at 6,904,000 tons—about 18 per cent more than last year's crop. About 93 per cent of this cane is expected to be used in the production of approximately 554,000 tons of 96° raw sugar.

On a harvested acreage 23 per cent greater than that of 1942, production of potatoes in 1943 turned out to be the largest of record. (See POTATOES.) The 1943 sweet potato crop of 72,572,000 bushels was 11 per cent greater than the 65,508,000 bushel crop of 1942 and 5 per cent above the 10-year (1932-41) average of 69,291,000 bushels. The acreage harvested was 25 per cent greater than in 1942 and 7 per cent above the average, but lower per-acre yields partially offset the increase in acreage. Practically all of the increase in production over 1942 came in the South Central States, with Louisiana, Texas, Alabama, and Tennessee leading the way.

Victory Garden Program. The call for Victory Gardens in 1943 met with a hearty response the country over. People took seriously the request that they should produce garden stuff for home use and thereby release food for our armed forces and our allies. The goal of 18,000,000 Victory Gardens set for 1943 was exceeded by at least 2,000,000. Victory Gardens dotted the American landscape on farms, in rural towns, in back yards, and on vacant lots in all our cities. Moreover, Victory gardeners by and large were successful.

It is estimated that the Victory Gardens produced something like 8 million tons of food in 1943. Pantry and storage shelves in many farm, town, and city homes are full of home-canned tomatoes, string beans, peas, corn, and other vegetables yielded by the Victory Gardens. Something like 7½ million farm and rural families produced and preserved the major part of their winter supply of vegetables and fruits, and many urban families did considerable home canning and preserving. For the 4-H clubs, the Victory Gardens were one of the most important projects of the year. These clubs did great service in caring for such gardens and helped to produce much of the family food supply.

Farm Earnings. Farmers' income from 1943 marketings may run above 19 billion dollars, as compared with \$15,500,000,000 in 1942. The 1942 figure was more than one-third greater than that of the previous year, and with Government payments made a cash farm income of \$16,200,000,000. The corresponding prewar average (1935-39) was \$8,500,000,000. Farm costs have risen, but not as much as the farm income. Realized net income of farm operators in 1943 will probably amount to about \$12,600,000,000, as compared with \$9,500,000,000 in 1942 and \$6,300,000,000 in 1941. Current prices encourage most farmers to use all their available resources, though it does not follow that prices for all farm commodities are necessarily satisfactory. Some prices may be too high and others too low to get the best result

in terms of war production. From the standpoint of the farm income, however, the position is exceptionally favorable.

The income of persons on farms has improved in relation to that of persons not on farms. At the outbreak of the war, the income per capita of persons on farms was below the prewar (1910-14) parity. Production and marketings of farm products have since increased greatly, and the demand has been such as to raise prices with the increase in production, as in the World War I period. In 1939 the receipts from marketings, with the addition of Government payments, raised the per capita income to persons on farms to only 94 per cent of parity with the nonfarm income of persons not on farms. By 1941 the farm income from marketings plus Government payments exceeded parity. Including Government payments, the income per person on farms in 1942 amounted to 138 per cent of parity, which compares with nearly 147 per cent in 1917 and 165 per cent in 1918.

Forecasting farm income with any precision for the duration is impracticable, since no one knows how long the war will last. The Department expects that the current upward trend will continue into 1944. Farm production, however, may show only a moderate over-all increase, and prices will be increasingly subject to ceilings. Moreover, farm prices in 1943 have averaged almost 80 per cent above the average for the five years 1935-39 and must consequently be expected to rise less hereafter. With lower rates of increase in view for both production and prices, the farm income must show a corresponding trend, though some further additions to farmers' income may result from the operation of purchase-and-sale programs or their equivalent. Average net money incomes of farm families have increased rapidly since the outbreak of the war, and the increase will probably continue into 1944, more strongly in the lower and median income groups than in the top groups. Though farm income may not be much higher when the war stops than it is now, it will be high and will enable farmers to set aside reserves and to finance much of their operating expense without borrowing.

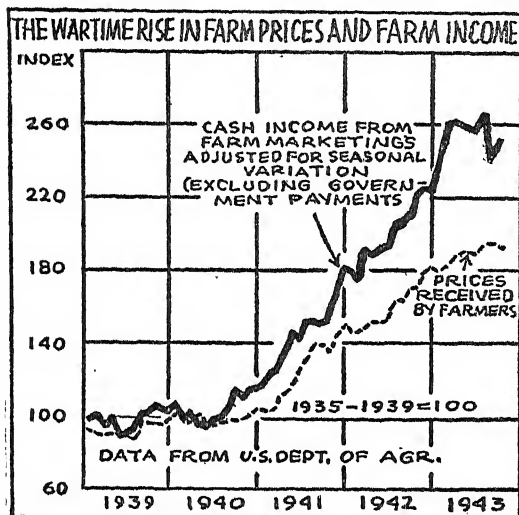
Wartime Price Control. The United States price stabilization program started from mere "price watching" in 1940, grew into selective or limited price control, and then widened into a comprehensive many-sided policy designed to brace the whole economy against wartime strains and stresses. The short term for it is "inflation control."

Stage by stage, from the price-watching period, the program added new elements and new techniques, notably rationing as the counterpart of price control and wage and salary stabilization as protection against inflationary spiraling. Actual price control began in 1941 with price-freezing orders on metals and other industrial products. Quickly the control broadened. Under the Emergency Price Control Act, under which regulations were in effect from Jan. 30, 1942, to Oct. 2, 1942, most nonagricultural products became subject to ceiling prices, and also about 40 per cent of the farm products.

In this period, however, the Emergency Act forbade OPA to set ceilings on processed or unprocessed agricultural commodities below a point which would return to farmers the highest of these four prices: 110 per cent of parity; the market price on Oct. 1, 1941; the market price on Dec. 15, 1941; or the average price from July 1, 1919, to June 30, 1929. Under this arrange-

ment the prices of uncontrolled foods advanced considerably.

Accordingly, in October, 1942, Congress amended the price-control legislation. The new measure (Public, 729, approved Oct. 2, 1942) directed the President, through any Government agency, to stabilize prices, wages, and salaries. Under certain conditions, for example, to meet rising labor costs or other expenses of production, the law authorized modifications in farm prices. An Executive order dated Oct. 5, 1942, extended price control to about 90 per cent of our food at



From the Agricultural Outlook, December, 1943

the retail level, though it still left out important seasonal products such as most fresh fruits and vegetables. See PRICE ADMINISTRATION; also WPB.

The anti-inflation program gained strength also from other nation-wide procedures. On Apr. 8, 1943, the President issued his "Hold the Line" Executive order. In line with this order, the Office of Price Administration and the Reconstruction Finance Corporation worked out, and since June and early July, have operated a program which reduced the retail prices of butter and the chief cuts of pork, beef, and lamb. Under this program the prices at retail of the commodities mentioned have been reduced about 10 per cent. Payments equivalent to this reduction have been made to processors from the funds of the Reconstruction Finance Corporation, so that prices to producers can be maintained at the original level.

Live hogs and apples were brought under ceilings. Also, the general outlines and key prices for ceiling or control regulations for beef cattle and winter fresh vegetables were announced. In addition the War Food Administrator has worked out a program of payments to fluid milk and butter-fat producers in order to cover increased costs of dairy feed to dairymen without affecting the price of milk and other dairy products at retail. Altogether, the price of almost every important food product is now subject to ceiling regulation, at the farm level as well as the retail level for a considerable number of commodities.

In short the Government in some cases is indemnifying processors and distributors for losses incurred or anticipated through lack of agreement between farm and ceiling prices, and in other cases is encouraging additional farm production at no extra cost to the consumer. This type of

action is a keystone in the price-stabilization arch.

Commodity Credit Operations. In order to maintain price stability, the Commodity Credit Corporation purchases the entire production of some crops. It controls the entire production of soybeans. Marked expansion in the output calls for the fullest possible utilization of the available crushing facilities, the relatively inefficient as well as the efficient. Moreover, large quantities of soybeans must be moved from the main soybean area to other localities that have facilities for crushing soybeans, when they are not in use for crushing cottonseed and other crops. It would be extravagant to provide margins for all processors on exactly the same basis. Margins necessary to cover crushing costs in the improvised plants or in areas distant from the main production areas would be excessive for the efficient favorably located plants and would involve excessively high prices for the oil and meal.

The CCC takes over the entire soybean crop because otherwise it would not be possible to establish reasonable processing differentials. Similar principles apply to the handling of the peanut crop. As a result, soybean and peanut producers receive agreed prices, processors have assurance that they will be able to cover their costs and make a profit, and users of the oil-crop products obtain supplies at reasonable prices.

In the handling of canning crops the operations of the CCC enable producers to get support prices and consumers to have ceiling prices lower than would be necessary otherwise. These operations result in some losses to the CCC. The production required is very large, and much of it goes to the armed forces and to our allies. Absorption by the CCC of part of the squeeze between the support prices and the ceiling prices reflects official recognition of the fact that the extra cost of getting sufficient production of the canning crops is to some extent a war cost and should not fall exclusively on the consumer. The same principle applies to sugar beets. In order to maintain the sugar-beet acreage, CCC is paying prices that are in excess of the present ceiling prices. It absorbs a loss on possibly one-seventh of the total production, and in this way prevents a rise in the price to consumers on the remaining six-sevenths as well.

Electrification of Farms. The importance of the nation's rural electric power lines to the production of its food has been recognized. Prior to Pearl Harbor the Rural Electrification Administration had been vigorously extending central station electricity to rural regions. During the fiscal year of 1941, for example, its borrowers built and energized 75,000 miles of line and brought power to 225,000 users.

Then, even before the advent of war, came a period of stock taking and of appraisal. The nation's raw materials, its copper and steel, had to be conserved. Each undertaking that claimed the use of war materials had to be examined from a consideration of national service. Therefore, in July, 1942, construction of 32 REA-financed systems which had been begun before the war was ordered halted. Only the most urgent line extensions were permitted.

In January, 1943, the War Production Board specifically recognized the importance of electricity on the farm. It issued a new ruling which permitted line extensions up to 5,000 feet to farms which had or were producing a minimum of 10 "animal units" and at least 1 unit for each 100 feet of line. (An "animal unit," for the purpose

of the WPB ruling, is 1 milk cow, or 30 breeding ewes, or 3 brood sows, or 160 lambs per year in feed lot, and so on.) Each farm, before it could be connected to a power line, needed to have or be able to get without priority such electrical farm equipment as a water pump, pig or chicken brooder, motor, feed grinder, or milker.

Two months later, in March, 1943, WPB modified this order, having the minimum number of food animal units required to complete service extensions. In April, 1943, WPB issued an order to complete some of the REA-financed systems whose construction had been halted the previous July. As a result of these rulings, during the fiscal year 1943 about 60,000 members were added to the REA-financed systems.

Resources of Small Farms. Small farms such as those operated by Farm Security Administration borrowers have important resources for expanded agricultural production. The one-third of the nation's farms which produce 84 per cent of the agricultural commodities that go to market will continue to be the source of most of the total commercial food production. These farms, however, are already producing at near capacity. Families on the FSA program, on the other hand, have not reached their peak production, and generally they have no shortage of labor. The small farmer finds he can milk 8 cows instead of 2 with family labor already available. He can keep 20 pigs instead of 10. As the demand increases for additional food supplies for the armed forces and shipment overseas, the nation will depend more and more on the smaller farms.

Operating loans for the purchase of livestock, equipment, and other farming essentials were made during the fiscal year to 51,015 families who had not previously been on the FSA program, and supplemental loans were made to 198,705 already on the program. A total of \$97,255,090 was advanced in loans from rehabilitation funds.

The collection record in the fiscal year 1943 was the best in the history of the FSA. From the beginning of the program to June 30, 1943, nearly one million families had borrowed \$778,522,696 in rehabilitation funds, and of this amount \$404,327,655 had come due. Of the total maturities 88 per cent on these supposedly "high-risk" loans had been repaid, and enough advance payments had been received to bring collections up to 93 per cent of the maturities. In addition, \$49,085,380 had been paid in interest. More than 260,000 families had repaid their debts completely. They were on their feet again as independent operators and drawing their credit from commercial sources.

For the fiscal year 1942-43 collections totaled \$128,720,775, or nearly a third more than the total amount of the \$97,255,090 which had been loaned during the year.

The borrowers' prompt repayments to the FSA are reflected in the record of repayments made by the FSA to the Reconstruction Finance Corporation. From July 1, 1940, when RFC funds were first used for rural rehabilitation loans, through June 30, 1943, the FSA had borrowed a total of \$332,315,000 from the RFC, and had paid back \$271,759,029 in principal and interest. The balance of approximately 62,000,000 still owed to the RFC on the past year's obligation is secured by borrowers' notes totaling approximately \$416,000,000, a ratio of more than 6 to 1.

Selective Crop Expansion. Our huge increase in food production since 1939 is the result, not of uniform, but of selective crop expansion developed farm by farm through careful thought and ad-

vance planning. It represents not just any kind of farm production, but the kind we need for the war. The achievement reflects the decisions and efforts of millions of farmers, expressed in planting, breeding, and feeding operations. Much shifting of crops has taken place, along with improvement and changes in crop rotations. Science has contributed significantly to the results.

Our food production has increased faster in this war than it did during the first years of World War I, largely because the work has been more thoroughly planned, more highly organized, and more scientific. Farmers have aimed especially at particular kinds of farm production, notably eggs, dairy products, meats, and oil crops, and they have found it necessary to vary considerably from their customary farm practices. The result is qualitatively as well as quantitatively remarkable, but next year the Government wants the farmers to do still better.

In 1944 the Government will ask farmers to plant 380 million acres, about 16 million acres more than in 1943, and more than in any previous year in our history. Possibly 1944 will chalk up still another high food record, though our farm plant is already utilizing nearly all the tillable land available. Increased emphasis will be placed on growing the right amounts of the right things in the right places. Farmers will convert more of their land to the production of the most needed crops. They have already gone far in that direction. Nevertheless, additional conversion is still possible, and in fact will be important for the duration. More acreage will be in crops such as dry beans, peas, soybeans, potatoes, and peanuts. Feed crops will be increased wherever they will produce more food or feed per acre than any alternative crop.

Civilian requirements are carefully calculated by economists in the War Food Administration (q.v.). Sometimes WFA asks the Army and Navy to change its estimated requirements so that civilian needs may be met. In some cases the change requested affects the total food requested; in other cases, the types of food desired. Shipments on lend-lease account may be cut down or changed from time to time, in line with supplies and other requirements. It was necessary this year, for example, to cut down the British call for cheese; on the other hand, the Russians presented an urgent request for dry peas and beans, and the allocation authorities decided the Russians needed these supplies more than we did. Naturally, our ability to satisfy these claims presupposes civilian rationing, which divides our limited food supplies for the best total advantage and plays no favorites. The price-control system plays a vital supporting role, in that it keeps essential foods within the reach of everyone. After supplies have been allocated, they must be shared. Price control plus rationing is the means.

Indications for 1944. The 1943 farm production will influence that of 1944. The 1943 peak of livestock production has been reached only by feeding more feed grain than can ordinarily be produced, by feeding more wheat than can ordinarily be spared, and by boosting livestock prices to a higher level relative to feed prices than can be maintained for more than a short period of time. Although livestock numbers are still increasing, we have already begun to feed the reserves of grain accumulated during recent good years. Also, as more ships become available, more of our grain will be needed for food and less can be used for feed. Soon we shall need to adjust our livestock

and poultry populations to numbers consistent with the quantity of grain and feed that we can currently produce and can spare for livestock.

Yet the lower adjustments in prospect need not mean lower food production, or even lower meat production in 1944. On a live-weight basis about 8 per cent of the livestock and poultry produced in 1943 will remain on farms at the end of the year. With pastures and ranges stocked nearly to their capacity, producers will need to increase the number of cattle marketed, and thus the market supply of beef. Hog marketings will probably reach a peak this fall, and will continue heavy into early 1944 even though the pig crop for market in middle and late 1944 may be smaller than it was this year.

It may be several years before dairymen can again afford to feed grain as liberally as they have during the past 12 months. The number of milk cows, however, is still increasing. Furthermore, commercial milk deliveries for manufacture and fluid sales may continue to increase even if the total milk production declines, because many farmers who are now selling cream and using the skim milk for feed will find it profitable to sell whole milk instead. From a nutrition standpoint it should be noted the increase in consumption of milk and whole milk products more than offsets the decrease in butter. The peak of egg production may come in the spring of 1944, but it has not yet been reached, and poultry flocks are still increasing rapidly.

But the problem of adjusting our livestock population to the changing situation will not solve itself. Farmers can draw further on the country's reserves of feed grain, and official agencies can facilitate increased grain imports. Adjustments through such means, however, can be only temporary. As the reserves of grain decline, the margin of returns from livestock over feed costs will probably decline too. Otherwise the farmers who usually have feed grain to sell might not want to sell it. They might prefer to increase their own flocks and herds; this would not leave enough feed for the farmers who depend on purchased grain. In the readjustment process, the balance of feed costs among areas may change, and the problem will arise of managing the total feed supply to the best advantage. It will be difficult entirely to prevent inequalities. The fact that we shall not have feed enough for all the livestock and poultry farmers would like to raise will necessarily affect different producers differently.

Primary in settling the matter will be continued need to maximize output of the products most desired.

Postwar Food Needs. As victory draws nearer the importance increases of estimating what adjustments will be necessary in agriculture when the fighting stops. Accordingly, the Department of Agriculture has tried to foresee what pattern our agriculture will have then, and what food requirements will exist in the early postwar years. It has also endeavored to gage the probable postwar condition of our agricultural plant, in crop and pasture land, range land, forest resources, farm buildings and machinery, technical facilities, farm finance, and other main features. The findings, though highly tentative, provide part of the necessary basis for postwar planning.

Broadly, the pattern our agriculture will have reached in 1944 shows what it will be like when the war ends. This is because in 1944 we shall be close to the top limit in our agricultural production, and because the composition of the output

will be approximately fixed for the duration. We can still bring some additional land into cultivation and can still do some shifting into more productive crops and livestock products. But we are approaching the point at which the opportunity for such changes will be small. It seems probable that the level of total production we can expect in 1944 with normal yields, will be close to the maximum under wartime conditions and that only minor changes will develop for the remainder of the war period.

Food requirements, however, will continue to rise, and will be higher at the close of the war than they are now. Tentative estimates for 1944 and 1945 indicate large increases in requirements over 1943 supplies. Moreover, these estimates assume that certain marked changes will be brought about in civilian food habits and also that certain shipping limitations will persist. Should the anticipated changes not be brought about in civilian food habits and should the shipping situation improve greatly, the food-requirement estimates will have to be raised.

As a matter of fact, the Department believes it would be more accurate to speak, not of food requirements or of food needs, but of estimates of supplies that will be taken if they can be produced.

See also the articles on the countries under *Production*; articles on leading crops, *DAIRYING*, *HORTICULTURE*, and *LIVESTOCK*. See also *AGRICULTURAL COOPERATION*; *AGRICULTURE*, U.S. DEPARTMENT OF; *EDUCATION*, U.S. OFFICE OF (for Rural War Production Training); *FOOD INDUSTRY*; *INSECT PESTS AND PLANT QUARANTINES*; *LABOR CONDITIONS* under *Employment*; *LEND-LEASE PROGRAM*; *RECONSTRUCTION FINANCE CORPORATION* under *Table* (for benefits to agriculture); *REFRIGERATION*.

ARTHUR P. CHEW.

AGRICULTURE, U.S. Department of (USDA). A Department of the U.S. Government. For activities in 1943, see *AGRICULTURE*. Since the United States entered the war the Department has undergone two major reorganizations in order to facilitate to the utmost the contribution of the Department toward winning the war. In December, 1941 (effected by Executive Order, Feb. 23, 1942), the 19 line agencies that previously reported directly to the Secretary were grouped for more effective coordination and action under the direction of eight group administrators: the Agricultural Conservation and Adjustment Administrator; the Farm Security Administrator; the Agricultural Marketing Administrator; the President, Commodity Credit Corporation; the Chief, Forest Service; the Agricultural Research Administrator; the Governor, Farm Credit Administration; and the Rural Electrification Administrator. There continued the general secretarial staff, and there was also established the Agricultural War Board to assist in coordinating the Department's efforts toward producing the food and fiber needed by the United States and her allies.

Executive Order 9280 of Dec. 5, 1942, further streamlined and coordinated the Department's programs; thereafter, it comprised three major administrative groups, the Agricultural Research Administration, the Food Production Administration, and the Food Distribution Administration. The Agricultural War Board (later National War Board) continued in its advisory capacity, but was known as the Departmental War Board.

Another shift occurred when the President, Mar. 6, 1943, transferred the Nutrition Division of the Office of Defense Health and Welfare Services to

the Food Distribution Administration of the Department. The Nutrition Division was consolidated with the Food Conservation Branch of the FDA, now designated as the Nutrition and Food Conservation Branch. On Mar. 26, 1943, the President consolidated the Food Production Administration (except the Farm Credit Administration), the Food Distribution Administration, the Commodity Credit Corporation, and the Extension Service into an Administration of Food Production and Distribution (later changed by Executive Order 9334, of Apr. 19, 1943, to War Food Administration), to be under the direction and supervision of an Administrator who is directly responsible to the President. All powers with respect to labor and manpower previously vested in the Secretary of Agriculture by orders of the Economic Stabilization Director and the Chairman of the War Manpower Commission were also vested in the Administrator. He also defined the functions and relationship of the Secretary and the War Food Administrator, to the extent necessary to enable them to perform their respective duties and functions.

By an Administrator's Memorandum issued Jan. 21, 1944, the names of the Food Production Administration and the Food Distribution Administration were changed to Office of Production and Office of Distribution, respectively. At the same time the Agricultural Adjustment Agency, the Farm Security Administration, and the Soil Conservation Service became independent agencies under the War Food Administrator, and an Office of Price was established to handle matters dealing with prices fixed for and price support of agricultural commodities.

Department of Agriculture
 Agricultural Research Administration
 Bureau of Animal Industry
 Bureau of Dairy Industry
 Bureau of Plant Industry, Soils, and Agricultural Engineering
 Bureau of Agricultural and Industrial Chemistry
 Bureau of Entomology and Plant Quarantines (See INSECT PESTS)
 Bureau of Human Nutrition and Home Economics
 Office of Experiment Stations
 Beltsville Research Center
 Farm Credit Administration (See AGRICULTURE)
 Federal Land Banks
 Land Bank Commissioner Loans
 Federal Intermediate Credit Banks
 Production Credit Corporations and Associations
 Banks for Cooperatives
 Cooperative Research and Service Division
 Emergency Crop and Feed Loans
 Regional Agricultural Credit Corporations
 Forest Service
 Rural Electrification Administration (See ELECTRIC LIGHT AND POWER)
 War Food Administration (See separate article)
 Office of Labor
 Office of Materials and Facilities
 Office of Price
 Office of Production
 Office of Distribution
 Agricultural Adjustment Agency
 Commodity Credit Corporation
 Extension Service
 Farm Security Administration
 Soil Conservation Service

The Secretarial Staff Offices (excepting Extension Service) continue their over-all service capacity to both the Department and the War Food Administration. They include the Bureau of Agricultural Economics, the Office for Agricultural War Relations, the Office of Budget and Finance, Office of Foreign Agricultural Relations, Office of Information, Office of Personnel, Library, Office of the Solicitor, and Office of Plant and Operations.

Secretary of Agriculture in 1943: Claude R. Wickard. Under Secretary: Paul H. Appleby (until January, 1944).

AGRICULTURE EDUCATION SERVICE. See EDUCATION, U.S. OFFICE OF.

AGRIPOL. See RUBBER.

AIR CONDITIONING. See REFRIGERATION AND AIR CONDITIONING.

AIRCRAFT. See AERONAUTICS and the topics there listed. For *Aircraft Carriers*, see NAVAL PROGRESS. For *Aircraft Recognition*, see PHOTOGRAPHY.

AIR FOAM. See RUBBER.

AIR FORCES. See AERONAUTICS; COAST GUARD; MILITARY PROGRESS; NAVAL PROGRESS; WORLD WAR. Specifically for *Air Service Command*, *Air Transport Command*, *Naval Air Transport Service*, see AERONAUTICS.

AIRPLANES, AIR ROUTES, AIR TRANSPORT, AIR WARFARE, etc. See AERONAUTICS and the topics there listed.

AIR RAIDS. See AERONAUTICS; WORLD WAR; and affected countries under *History*, especially BELGIUM, BOHEMIA and MORAVIA, BULGARIA, FRANCE, GERMANY, GREAT BRITAIN, HUNGARY, ITALY, JAPAN, NETHERLANDS EAST INDIES, NORWAY, RUMANIA. See also ART under *Salvage and Restoration*; PSYCHOLOGY. For *Air Raid Precautions* (wards, signals, shelters, etc.) see CIVILIAN DEFENSE, OFFICE OF.

ALABAMA. An east south central State. Area: 51,609 sq. mi. Population: 2,832,961 (1940 census); 2,777,322 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Chauncey M. Sparks (Dem.), inaugurated in January, 1943, for a four-year term; Lieutenant Governor, L. Handy Ellis; Secretary of State, Howell Turner; Attorney General, William N. McQueen.

ALASKA. The Territory of Alaska lies in the far northwest corner of the North American continent and includes the Aleutian Islands which extend westward more than 1,200 miles toward the Kamchatka Peninsula. Area, 586,400 square miles, inclusive of inland waters. Population, 1940, (taken Oct. 1, 1939) 72,524. Whites (1939) numbered 39,170; Indians and Eskimos, 32,458. Capitol, Juneau; population (1940) 5,729. Governor, Ernest Gruening. The strategic importance of Alaska, both from a defensive as well as offensive standpoint, has accelerated population trends in this region. Normally the annual fluctuation of laborers for seasonal work is 20,000 but wartime activities have increased the civilian population to an estimated 100,000.

Government and Political Status. Although Alaska was purchased from Russia in 1867 for \$7,200,000 it did not become an "incorporated Territory" until 1912 when Congress passed an Organic Act creating the Territory of Alaska. Under its terms the

Territory does not merely belong to the United States but is a part thereof. Of all the other territories belonging to the United States only Hawaii has a similar status. The Constitution and laws of the United States are automatically in force, with the exception of certain provisions which are clearly not applicable. The Governor is appointed by the President for a term of four years. Some Alaska departmental heads are appointed by the Governor, others are chosen by popular election. The Territorial Legislature consists of a Senate of 8 members and a House of Representatives of 16 members. Alaska has no Territorial judiciary, the four Federal judges being appointees of the President for terms of four years. Financing the territory is chiefly a Federal function. This is in a large measure due to the fact that the U.S. Government owns 99 per cent of Alaska's land. Federal taxes collected locally are returned to the Territory. In addition there are regular and special Congressional appropriations which include the expenses of the Legislature, the Governor's salary, and the health, welfare, and education of the natives (approximately 50 per cent of the 1940 population). Administration and supervision over Territorial affairs is not delegated solely to the local government but has remained a Federal function. More than 50 Federal agencies participate in the management of Alaska's problems.

Aviation and Communications. The Alaska Aeronautics and Communications Commission has general supervision over aviation and communications in the Territory. It is charged with the formulation of policy and enforces rules and regulations concerning the safety of persons operating or using planes, and over persons and property on the ground. The Territory has 20 radio communication stations in widely scattered towns, with operators in many stations taking observations for the U.S. Weather Bureau. The following figures show the growth of aviation in Alaska in 1942 over 1941:

<i>Aeronautical Operations</i>	<i>1942</i>	<i>% gain</i>
Number of hours flying time.....	44,182	10
Number of miles.....	4,932,868	11
Number of passengers flown.....	57,028	37
Number of passenger miles.....	11,106,122	43
Pounds of mail flown.....	954,020	56

Forests. Alaska's two national forests have a combined area of 20,864,000 acres and an estimated timber stand of 84,760,000,000 board feet. These resources are readily accessible from protected waterways and can be purchased for the use of local manufacturing industries and individuals. Such extensive holdings are capable of enormous products of pulp and paper. There is a potential annual yield of over 1,000,000 tons of newsprint which is one-fourth of the present total requirements of the United States. These areas can also furnish good locations for waterpower development, industrial plants, town sites, fox farming, recreational activities, and many other special purposes.

Furs. Fur farming is an important industry in the Territory with wildlife resources valued at \$100,000,000. In 1941, 608,419 pelts brought \$2,280,538.50. Muskrats headed the list with 511,805 pelts valued at \$818,888; beaver was worth \$525,453; and mink skins brought \$333,711. Other furs marketed in order of total value were: blue fox, white fox, red fox, lynx, otter, marten, cross fox, silver fox, wolf, weasel, coyote, wolverine, polar bear, squirrel, black bear, marmot, and hare. During the year ending June 30, 1943, the fur seal industry in the Pribilof Islands yielded a record-

breaking take of 117,164 skins. This was due in a large measure to the fact that military circumstances had halted this business the preceding year after only 127 seals had been killed. For mineral production and fishing statistics (latest available) see YEAR BOOK for 1943, pp. 23-24.

Education. Alaska has two school systems, one for white children and those of mixed blood, called the Territorial Schools, and the other for natives (Indians and Eskimos) known as the Native Schools. In the case of the former the Territory has full responsibility for the control, administration, and financing of education whereas in the latter the Federal Government, through the Office of Indian Affairs, assumes the educational burden. The Territorial system in 1942 had 56 rural and 18 city schools with 6,754 pupils. In the same year there were 120 elementary and 3 vocational boarding schools (secondary) for the natives. Subjects taught in the Territorial Schools correspond to a considerable degree to the curriculum in the public schools in the States. Emphasis in the Federal system is placed upon those vocational skills which will enable children to earn a living in the particular region where they reside.

The University of Alaska, founded in 1922, reflects the pioneering nature of the practical interests and needs of the people. It is an accredited member of the Northwest Association of secondary and higher schools. In 1942 the faculty numbered 36 instructors. Courses leading toward a bachelor's degree are offered in agriculture, arts and letters, business administration, chemistry, civil engineering, education, general science, home economics, mining engineering, and pre-medicine. Preliminary curricula, in which degrees are not yet awarded, are: aeronautical, architectural, chemical, electrical and mechanical engineering, fisheries, forestry, journalism, law, and nursing. Short courses and graduate studies are available in a few specialized fields. Tuition is free to residents of the Territory.

History. During 1943 the scene of active warfare moved westward from Alaska when Japan lost its toe hold in the Aleutians. Defeat of the Japanese at Dutch Harbor on June 3, 1942, and at Attu and Kiska in 1943 permitted the U.S. armed forces to move from defensive to offensive preparations. This Territory held a unique military position: as a valuable base from which to attack Japan and also to supply Russia and China by means of shorter air routes. From Kiska to Manila the distance was only 4,000 miles, but from San Francisco to Manila it was 7,700 miles. From Fairbanks in the center of Alaska the air-line distance to Murmansk was about 3,235 miles or half the route used by most ocean convoys. Military bases in Alaska had now become depots for transshipment of men, materiel, and supplies.

The people of Alaska consistently exceeded their quota of war bonds. Their percentage in the last month of the fiscal year exceeded that of any of the 48 States and was topped only by Hawaii's record. Alaska's most famous industry—gold mining—was suspended for the duration, except in those mines where strategic minerals could be recovered with the gold. Steps were taken by the government to prepare for peace-time conditions. Joint economic committees of the United States and Canada began to collaborate on the development of 1,000,000 square miles of Alaska, British Columbia, and the Yukon Territory. The population of this expanse numbered about 100,000 or roughly one person for every 10 square miles. The problem was how to develop and harness the tremendous natural resources. Completion of the Alaska Highway

(q.v.) was one step in this direction. Another was the formal opening of telephone communications with the United States on Nov. 19, 1943. The final link in this system covered 2,026 miles from Edmonton to Fairbanks, Alaska. Credit for the planning and supervision of the project belonged to the U.S. Army Signal Corps. The introduction in Congress of a bill by Senators William Langer and Patrick McCarran to extend Statehood to the Territory of Alaska reflected its progress and growing importance in American life.

See AQUEDUCTS; CANADA and JAPAN under *History*; WAR COMMUNICATIONS, BOARD OF.

CHARLES F. REID.

ALASKA HIGHWAY. In an exchange of notes between the Canadian and U.S. Governments, made public on July 22, 1943, they agreed that the so-called Alcan Highway from Dawson Creek, British Columbia, to Fairbanks, Alaska, be given the official name "Alaska Highway." The Alaska Highway was opened to through traffic in October, 1942 (see 1943 YEAR BOOK, pp. 23, 25, for map and description). The work of installing permanent bridges and completing construction continued throughout 1943 and was expected to end in 1944.

See AQUEDUCTS; BRIDGES; ROADS AND STREETS.

ALBANIA. A former Balkan kingdom on the east shore of the Adriatic Sea, occupied by Italian troops on Apr. 7, 1939, and proclaimed an Italian protectorate the following day. Excluding the Greek and Yugoslav districts (5,790 sq. mi. with about 700,000 inhabitants) annexed to Albania in 1941, the area was 10,629 square miles and the estimated population 1,063,000 on Jan. 1, 1940 (1,003,124 at the 1930 census). Living births were about 30,662 in 1941; deaths, 13,188. Capital, Tirana (pop. 30,806 in 1930); other chief towns, Scutari (Shkodër), 29,209; Koritsa (Korçë), 22,787; Elbasan, 13,796; Durazzo (Durrës), the chief port, 8,739. Most of the cities of southern and central Albania were badly damaged during the Italo-Greek war of 1940-41.

Education and Religion. Primary education is nominally compulsory, but illiteracy remains high. In 1939 there were 663 state primary schools, with 56,936 pupils; 19 intermediate schools, with 6,235 pupils; and about 500 Albanian students in various foreign universities. The estimated religious division of the population was: Moslems, 688,280; Orthodox Christians, 210,313; Roman Catholics, 104,184.

Production, etc. Albania's chief products, with their output in 1939 in metric tons where available, are: Corn, 123,400; tobacco, 2,700; olive oil, over 4,000 in 1942; wool, 2,100; petroleum, 208,000; timber, hides, dairy products, and fish. Crude oil output averaged 13,000 metric tons monthly during the first quarter of 1942. Other production in 1939 (metric tons) was: Wheat, 50,200; barley, 5,200; rye, 3,200; oats, 13,000. In 1938 there were 1,573,857 sheep, 391,175 cattle, 54,426 horses, 44,579 asses, and 10,391 mules. There are copper, chrome, and other mineral deposits, which Italy commenced to exploit in 1940. Flour, olive oil, and cheese are the principal manufactures. For the latest figures on foreign trade and finance, see 1943 YEAR BOOK.

Transportation. The highway network extended 1,759 miles in 1940 (750 miles suitable for motor traffic), but this was badly disrupted by war in 1940-41. Italian air services connect Tirana and other Albanian cities with Rome and other points. Construction of a railway between Durazzo and Elbasan, the first line in Albania, was begun in

May, 1940. An Italian-Bulgarian accord of Oct. 7, 1942, called for construction of a motor highway between Durazzo and Sofia.

Government. King Zog I, proclaimed King of Albania by an independent National Assembly Sept. 1, 1928, was dethroned Apr. 12, 1939, by an Italian-controlled Constituent Assembly, which abrogated the existing constitution. An Italian-sponsored government then offered the Crown of Albania to King Victor Emmanuel of Italy. A personal union between the two kingdoms was thus effected Apr. 14, 1939. The following June 3 Victor Emmanuel issued a constitutional statute making the Albanian throne hereditary under his dynasty and vesting legislative, judicial, and executive powers in the King's hands. Legislative powers were delegated in part to an Albanian Fascist Corporative Council, based on a newly organized Albanian Fascist party, and executive and judicial powers to Albanian officials acting under Italian guidance. Albanian remained the official language. A treaty signed the same date placed Albania's foreign relations in the hands of the Rome Government (see YEAR BOOK for 1939, p. 22). Under Italian direction, Albania was involved in war with Greece on Oct. 28, 1940. The puppet Government declared a state of war with the Union of Soviet Socialist Republics on June 28, 1941, and with the United States on Dec. 17, 1941.

History. The overthrow of Mussolini on June 25, 1943, and the capitulation of the Badoglio Government in Italy to the Allies early in September led German armed forces to wrest control of Albania from the Italian army of occupation and to establish a pro-German puppet government at Tirana. The Germans also undertook to crush the guerrilla bands that controlled large districts in the interior and had kept some 100,000 Italian troops tied down in Albania.

The three principal guerrilla-patriot groups fighting the Axis forces were those led by Col. Muharrem Bajraktari in the northeast, by Myslim Pesa in the central region around Tirana, and by Col. Bilal Nivica in the south. These groups had intensified their activities early in 1943 as a result of pledges of Albanian independence given by the British, American, and Soviet Governments late in 1942. During the spring they successfully resisted a drive to exterminate them led by the former Italian Chief of Staff, Gen. Alberto Pariani, who was named Lieutenant General of Albania for that purpose. Meanwhile the growing unrest in Albania led to four successive reorganizations of the Italian-controlled puppet government at Tirana in the first half of 1943.

The German drive against the Albanian guerrillas was handicapped during the second half of the year by Anglo-American air and sea attacks upon German military bases. British warships in November and December repeatedly shelled Durazzo and other Albanian ports under German control, while American and British bombers based in southern Italy attacked German airfields and supply bases. Prime Minister Churchill stated in Parliament on November 4 that British liaison officers were aiding thousands of Albanian guerrillas. With the help of Allied munitions and supplies, the guerrillas continued to harass the Germans and disrupt their communications despite German bombing and burning of villages in the guerrilla districts and the slaughter of civilians.

Churchill in his statement of November 4 reiterated his Government's support of Albanian independence. But there was no Allied agreement as to the composition of an independent

government. King Zog from his place of refuge in London continued throughout 1943 his unsuccessful efforts to win Allied recognition as the legal head of the Albanian state. In a statement issued in London October 15 he voiced disappointment that "although we have asked many times to be accepted among the United Nations, we are still left out." Apparently there was little support for Zog among the Albanian guerrillas. Late in October the pro-German puppet regime at Tirana appointed a Regency Council, giving rise to reports that the Germans were grooming the Prince of Wied for a return to the throne which he was forced to vacate after a brief and stormy reign in 1914.

See ITALY under *History*.

ALBERTA. A western province of Canada. Area, 255,-285 square miles, including 6,485 square miles of fresh water. Population (1941 census), 796,169 (426,458 male; 369,711 female). Racial origin of the population (1941 census): British 399,432, German 77,721, Ukrainian 71,868, Scandinavian 63,494, French 42,979, Polish 25,845, Netherland 20,429, Russian 19,316, etc. Religious membership (1941 census): United Church 193,664, Roman Catholic 191,343, Anglican 113,279, Lutheran 84,630, Presbyterian 68,910, Greek Orthodox 34,991, Baptist 32,268, Mormon 14,960, Mennonite 12,097. Chief cities: Edmonton (capital) 93,817 inhabitants in 1941, Calgary 88,904, Lethbridge 14,612, Medicine Hat 10,571. In 1942 there were 18,203 live births, 6,077 deaths, and 9,033 marriages. Education (1940-41): 180,169 students enrolled in schools and colleges.

Production. The gross value of agricultural output for 1942 was \$365,607,000 (field crops accounted for \$231,568,000, farm animals \$88,720,000, milk \$24,408,000, poultry and eggs \$13,884,000, fruits and vegetables \$3,759,000, fur farming \$1,065,000). Chief field crops (1942): wheat 178,000,000 bu., oats 175,000,000 bu., barley 75,000,000 bu., rye 4,400,000 bu., flaxseed 2,200,000 bu., potatoes 135,400 tons, turnips, etc. 24,000 tons, hay 1,337,000 tons, grain hay 1,600,000 tons, sugar beets 342,000 tons. Livestock (June 1, 1943): 1,627,000 cattle (inc. 376,000 milk cows), 2,337,700 swine, 900,000 sheep, 627,900 horses, 9,202,000 hens and chickens, 570,200 turkeys. Furs (1941-42): 11,-713,686 pelts valued at \$5,162,636.

Mineral output in 1942 was valued at \$46,410,-960, of which coal (7,665,052 tons) accounted for \$22,386,637, petroleum (10,150,000 bbl.) for \$15,500,000, and natural gas (31,000,000 M cu. ft.) for \$5,270,000. Manufacturing (1941): 1,108 plants, 16,761 employees, \$20,151,705 for wages, \$94,176,-887 for cost of materials, \$45,958,219—the net value of production.

Government. Finance (year ended Mar. 31, 1942): revenue \$27,213,546; expenditure \$19,965,125; total direct and indirect liabilities (less sinking funds) \$158,742,013. The executive power is vested nominally in the Lieutenant Governor but actually in the ministry of the Legislature. There is a Legislative Assembly of 57 members elected by direct vote of the people (36 Social Credit, 19 Independent, and 2 other members were elected at the provincial general election of Mar. 21, 1940). Alberta is represented by 6 Senators (appointed for life) and 17 elected members in the Dominion Parliament at Ottawa. Lieutenant Governor, J. C. Bowen (appointed Mar. 20, 1937); Premier, E. C. Manning (Social Credit), sworn in (May 31, 1943) to succeed William Aberhart (q.v.) who died May 23, 1943. See CANADA under *History*.

ALCAN HIGHWAY. Former name of the Alaska Highway (q.v.).

ALCOHOLS. See CHEMICAL INDUSTRIES; CHEMISTRY under *Alcohols*; RUBBER. Also see LIQUOR PRODUCTION. For *Alcoholism* see PSYCHIATRY.

ALDOL PROCESS. See RUBBER.

ALEUTIAN ISLANDS. See FISH AND WILDLIFE SERVICE; WORLD WAR under *The War in the Pacific*.

ALGERIA. A north African territory of France. Area, 851,350 square miles, of which all except 222,206 square miles are desert. Capital, Algiers (Alger). The estimated population on Jan. 1, 1940, was 7,600,000. At the 1936 census there were 7,234,684 inhabitants (6,592,033 in the Northern Territory and 642,651 in the Southern Territory), including 987,252 Europeans (853,209 French citizens) and 6,247,432 Moslem natives. On July 22, 1940, there were 20,000 Italians permanently established in Algeria. Chief cities (1936 populations): Algiers, 264,232; Oran, 200,671; Constantine, 113,777; Bona (Bône), 86,332; Philippeville, 66,112; Sidi-bel-Abbes, 54,754.

Production. The main occupations of the people are agriculture and stock raising. In 1941 yields of important cereal crops (in metric tons) were: Wheat, 870,900; barley, 696,700; oats, 116,100. Tobacco production was 12,200 metric tons in 1940; olive oil, 8,500 in 1940-41; wool and mohair, 7,400 in 1938; natural phosphates, 450,000 in 1939; pyrites, 44,000 in 1938; iron ore (metal content), 1,500,000 in 1939. Wine production in 1941 was 10,460,000 hectoliters (hectoliter equals 26.42 U.S. gal.). Dates, figs, bananas, and almonds are other important crops.

Trade and Finance. No trade figures have been published since the outbreak of World War II (see 1943 YEAR BOOK for latest statistics). Normally four-fifths of Algeria's trade was with France. Budget estimates for 1940 placed revenues at 2,526,128,968 francs; expenditures, 2,525,778,285 francs. In January, 1943, Gen. Henri Giraud's High Commissariat for French North Africa (Algeria, Morocco, Tunisia) adopted a budget of \$299,302,-586, of which all except \$16,000,000 was allotted for military purposes. After the Allied landings in North Africa, the franc was pegged at 300 to the pound sterling and later revised to 200 to the pound.

Transportation. In 1941 Algeria had about 2,734 miles of railway line in operation, 43,239 miles of roads, and air services connecting Algiers with other North African cities and with Marseille, France. Construction of a trans-Saharan railway linking the Algerian and Moroccan railway network with the Niger River in French West Africa was begun in 1941 and carried southward to a point 40 miles south of Colomb-Bechar by July, 1942. Construction was discontinued after the Anglo-American landings in North Africa Nov. 8, 1942. Communications across the Sahara with French West Africa meanwhile were maintained by air and by two motor services linking Colomb-Bechar with Gao, and Algiers with Zinder and Niamey. The shipping tonnage handled in Algerian ports declined from 12,441,000 in 1938 to 6,277,000 in 1940.

Government. Administration was centralized in the hands of a Governor General appointed by the French Government. Previous to the collapse of the French Republic in 1940, the departments of Algiers, Oran, and Constantine in Northern Algeria were considered integral parts of metropolitan France and were represented in the French Parliament by 10 deputies and three senators. Southern Algeria had a French military government. Under

the Vichy regime, full executive and legislative powers for the entire colony were vested in the Governor General. Governor General at the beginning of 1943, Gen. Yves Chatel (appointed November, 1941). Chatel aligned Algeria with the "provisional government" established by Adm. François Darlan at Algiers on Nov. 12, 1942 (see 1943 YEAR BOOK, p. 27). For developments during 1943, see below.

HISTORY

Political Events. Algeria during 1943 played a central role in the Allied drive to expel the Germans from France and the movement for the restoration of French unity and independence. It served as a base of operations for General Eisenhower's armies during the Tunisian, Sicilian, and Italian campaigns. Algiers was used as the Allied headquarters for both military operations in the Western Mediterranean and relief and rehabilitation work throughout French North Africa. The establishment of the Darlan-Giraud regime there on Nov. 12, 1942, had made the city the capital of French North and West Africa. When Giraud's administration was merged with the Fighting French movement in the French Committee of National Liberation early in June, 1943, Algiers became in effect the provisional capital of the entire French overseas empire.

The political evolution in Algiers and throughout French North Africa away from the pro-Fascist, totalitarian methods and principles implanted by the Vichy Government under German influence is described in the article on FRANCE under *History*. In line with this evolution, Governor General Chatel of Algeria was replaced by Marcel Peyrouton late in January and Peyrouton was succeeded by Gen. Georges Catroux in June. Catroux was also appointed Commissioner for Moslem Affairs by the Committee of National Liberation.

The Giraud decrees of March 17 repealed all Vichy legislation in North Africa contrary to the principles of the Constitution of the French Republic, including laws discriminating against Jews and Masons. The Algerian Councils General and elected municipal assemblies throughout North Africa holding office up to June 22, 1940, were restored and their powers prolonged until new elections could be arranged by a future constitutional government of France. (The Cremieux decree of Oct. 28, 1870, granting French citizenship to Algerian-born Jews, was revoked at the same time, but was restored the following October 21.) Freedom of speech, press, and assembly was restored to a considerable degree, although subject to the emergency laws issued by the French Republican government in August, 1939. Some 5,000 political prisoners held in concentration and forced labor camps were released under the supervision of an Anglo-American commission. Among them were about 700 Spanish Republican refugees, most of whom obtained visas for Mexico.

This strongly democratic trend, produced by combined pressure from the adherents of Gen. Charles de Gaulle's Fighting French movement and the British and American Governments, was welcomed by most of the French civilian population of the North African cities and by many in the lower ranks of the French armed forces in that region. But it was repugnant to many of the French landowners, the well-to-do business men and industrialists, and many of the higher army officers.

Moslem representatives from Algeria, Morocco,

Tunisia, and French West Africa on the Permanent Council of War Economy at Algiers, affirmed their loyalty to the Allied cause on March 6. However, the danger of an Arab-Moslem rising was not considered ended until after the Allied victory over the Axis forces in Tunisia and the improvement of difficult economic conditions. Some of the native nationalists had placed their hopes for independence in a German victory. A number of Arabs were executed by the Giraud regime for espionage and sabotage on behalf of the Axis early in the year. But the bulk of the Arabs remained sympathetic or indifferent to the Allied cause, partly because of the friendly relations established by American soldiers and the conciliatory efforts of French officials.

As a friendly gesture toward the 18,000,000 Moslems in French North Africa, the Committee on National Liberation on August 24 undertook to provide facilities for the annual pilgrimage to Mecca, which had not taken place since October, 1939. Moslem leaders, however, pressed the French for more substantial concessions in the way of economic and political reforms. The entire Moslem delegation to the Algerian Financial Council demanded certain "financial reforms" with such insistence that Governor General Catroux on September 22 dissolved the delegation of 24 Arabs and interned two of the leaders. The latter were charged with provoking civil disobedience, disturbing public order during time of war, and attempting to impede the functioning of public institutions. The French members of the Financial Council then proceeded to approve an increase in taxation and the expenditure of an additional 257,000,000 francs (about \$5,140,000) for the French war effort.

An expected political crisis over Catroux's action failed to materialize. On October 16 the French Committee of National Liberation approved the reestablishment of the Moslem financial delegation in response to an Arab petition. The restoration on October 21 of the Cremieux law, which placed Algerian Jews in a favored position as compared with the Moslems, raised the possibility of more trouble. However in a speech at Constantine December 12 General de Gaulle announced the decision of the Committee of National Liberation to grant French citizenship to "tens of thousands of French Moslems" in Algeria, to increase the proportion of Moslems in local councils and public offices, and to improve Moslem living conditions. This was followed on December 14 by a decree granting French citizenship to all Algerian Moslems who could read and write French. Only about 10 per cent of the 6,000,000 Moslems in Algeria had elementary educations.

Economic Developments. The economic relief and rehabilitation measures inaugurated in French North Africa by Anglo-American authorities late in 1942 (see 1943 YEAR BOOK) were extended during 1943. Yet the economic situation remained extremely difficult. For two years previous to the Anglo-American landings, North Africa had been drained of food supplies and raw materials by metropolitan France and Germany while receiving very few consumers goods in return. Shortages of sugar, tea, cotton cloth, motor trucks, gasoline, and machinery parts, coupled with distrust of the currency, led farmers to withhold their crops and encouraged widespread black market operations.

Despite the distribution of Anglo-American relief supplies, the situation showed little improve-

ment during the first part of 1943. Giraud's mobilization of men to build up the armed forces and the demand for laborers by the British and American armies caused an acute labor shortage and reduced food production. Requisitioning of trucks by the French army and the strain placed on all transportation facilities by the campaign in Tunisia prevented the delivery of farm produce to the larger cities. Free spending by the Allied armed forces had a highly inflationary effect, and led producers to hold their stocks for higher prices. On August 29 Governor General Catroux was forced to threaten farmers with internment and confiscation of their food stocks unless surplus grain was delivered for sale on the general market by November 1. Effective September 1, he ordered a 25 per cent increase in wages and salaries.

To prevent further deterioration of the economic situation the North African Economic Board, an Anglo-American agency, arranged for a steady inflow of lend-lease and other civilian supplies from America and Britain. Up to May 22 some 600,000 tons of food, fuel, clothing, medical supplies, and other necessities had been distributed, while some 350,000 tons of North African minerals and other strategic raw materials had been delivered to the United States and Britain. Non-military imports from overseas continued at the rate of some 30,000 tons monthly during the rest of the year.

Of the \$40,000,000 of lend-lease-civilian supplies sent to North Africa by the United States up to June 27, \$25,000,000 had already been repaid by the French authorities. The distribution of cloth proved particularly effective in stimulating production by native farmers. In the five months ending with July, more than 300,000 tons of coal and food was sent to French North Africa from Britain. Due to increased North African production, food imports from United Nations sources were cut off completely during the second half of 1943 except for sugar, tea, and milk.

See **MOROCCO** and **TUNISIA** under *History*.

ALIEN PROPERTY CUSTODIAN, Office of. A war agency of the United States government, established by executive order of Mar. 11, 1942. The Alien Property Custodian has the power to direct, manage, supervise, control, or vest property of nationals of enemy or enemy-occupied countries. As of Aug. 31, 1943, the Office of Alien Property Custodian had taken over the enemy interest in 386 business enterprises, 203 parcels of real estate, 29 ships, 117 lots of miscellaneous tangible property. The Office had also taken title to more than 41,000 patents and patent applications formerly owned by nationals of enemy countries and enemy-occupied territories. Many of the enterprises and all the ships have been put to work supporting the war effort. The patents are being licensed to American industry, as applications are received, on a nonexclusive, royalty-free basis for the life of the patent.

ALIENS. See **IMMIGRATION, EMIGRATION, AND NATURALIZATION**. For **Enemy Aliens**, see also **ALIEN PROPERTY CUSTODIAN**; **FEDERAL BUREAU OF INVESTIGATION**; **LAW under War Decisions**; **WAR RELOCATION AUTHORITY**; **SOCIAL SECURITY BOARD**.

ALLERGIES. See **PSYCHIATRY**.

ALLIED CONTROL COMMISSION. See **ITALY** under *History*.

ALLIED MILITARY GOVERNMENT (AMG). See **ITALY** under *History*; **UNITED NATIONS**.

ALLOWANCES, Family (for service men). See **SELECTIVE SERVICE SYSTEM**.

ALLOYS. See **CHEMISTRY**; also the alloying metals, **NICKEL**, **CHROMIUM**, **MANGANESE**, **TUNGSTEN**, **VANADIUM**, **MOLYBDENUM**.

ALSACE-LORRAINE. The two border provinces annexed by Germany after the Franco-Prussian War and returned to France by the Versailles Treaty (June 29, 1919). They were reoccupied by German troops in June, 1940, and placed under German civil administration on or about Nov. 30, 1940. Area, 5,605 square miles; population (1936 census), 1,915,627. Lorraine was merged with the Saar district (Saarpfalz) to form the new German province of Westmark. See **FRANCE** under *History*.

ALUMINUM. Americans who, in 1942, had tossed their saucepans into community scrap piles, were astounded to find that, a year later, supply of aluminum progressively was forging ahead of requirements and that aluminum scrap was a drug on the market. The War Production Board depicts the winning of the race for adequacy as follows:

	1943	Total Supply (Millions of lb.)	Allotments
First quarter.....	582.1	582.1	534.8
Second quarter.....	633.4	633.4	585.5
Third quarter.....	790.4	790.4	661.6
Fourth quarter.....	871.2	871.2	774.0
Total.....	2,877.1	2,877.1	2,555.9

Reasons given were (1) more careful screening of aircraft requirements; (2) more conservative statements of requirements by principal consuming groups in the war program as a result of longer experience in compiling estimates; (3) failure of fabricating plants, such as forge shops and extrusion producers, to gobble ingots as fast as they were produced.

Although occasional bottlenecks in fabricating capacity popped up during the year, downward revision of the Army's estimated requirements and the expectedly high rate of productivity from existing plants made possible cancellation of contracts to build three huge aluminum extrusion plants at Memphis, Tenn., Columbus, Neb., and Hammond, Ind. The aluminum fabricating industry already was a giant. Compared to 1939, estimated 1943 output of aluminum forgings was 45 times as great, tubing 13 times, rod and wire 12 times, extruded shapes 10 times, and aluminum sheets 7 times.

Capacity of primary aluminum plants, those which produce metal from ore rather than from scrap, today is rated at 2,200,000,000 lb. annually for the United States. Since many of these plants were not in full production throughout 1943, and because labor necessary for capacity output was not always available, the year's total was about 360,000,000 lb. less. The value of 1943 output was \$276,000,000, compared to \$150,768,000 in 1942. At the end of 1943, WPB curtailed production because of oversupply.

An avalanche of scrap aluminum from factories and demolished aircraft from the battle front broke the OPA ceiling price in the fall of the year, the oversupply of scrap amounting to 10 million lb. by the end of August. For a time there were no buyers at any price. Secondary aluminum smelters—those melting aluminum scrap—had lowered their prices on ingots as much as 2½ to 3 cents per lb. by the end of November, a situation partially recognized by OPA in mid-November when ceilings on aluminum scrap and secondary ingots were reduced 1½ cents per lb. The new base price for secondary in-

got was 12½ cents per lb. To relieve the situation, the government agreed to purchase and stockpile, through Metals Reserve Co., 18 classes of secondary ingot. A corollary program was introduced to encourage greater use of secondary aluminum by the Army and Navy, lend-lease to Russia, and relaxation of use restrictions.

A scarcity of ore threatened early in 1943 when vessels from Dutch Guiana were sunk with grim regularity in the Caribbean by Nazi U-boats. Arkansas and Alabama bauxite mines increased production, however, and together with the thwarted U-boat menace, prevented an ore paucity. The United States production of domestic bauxite totaled 7,166,000 short tons in 1943, and imports of South American bauxite amounted to nearly 1,500,000 short tons. Stockpiles of more than 4,000,000 tons were accumulated.

Canada contributed to American supply by delivering 600 million lb. of a 1,300,000,000-lb. contract by the end of November. The balance was scheduled to be delivered at the rate of 40 million lb. a month, which would complete the contract in early 1945.

Slightly more than one half of primary aluminum capacity is government owned, and more than 80 per cent of new fabricating facilities, which have mushroomed from practically nothing during the war, are government financed. The problem of utilizing these plants following the war, when aircraft requirements will be sharply cut, is a knotty one. Secretary of Commerce Jesse Jones believes that about 900 million lb. of primary aluminum a year represents the immediate postwar market. Three times prewar consumption, this represents only about 40 per cent of present plant capacity.

See ELECTRICAL INDUSTRIES; MACHINE BUILDING.
CHARLES T. POST.

AMERCOTE. See PLASTICS.

AMERICAN FEDERATION OF LABOR (A.F.L.). See under SOCIETIES; also LABOR CONDITIONS under *Labor Movements*; NATIONAL LABOR RELATIONS BOARD. **AMERICAN FEDERATION OF MUSICIANS.** See MUSIC.

AMERICAN LEGION, The. An organization of American veterans of both World Wars I and II. It became a two-war organization, Oct. 29, 1942, when President Roosevelt signed Public Act 767, making honorably discharged veterans of World War II eligible for membership. The Congressional amending of the 1919 charter was authorized by the first wartime convention in Kansas City, Mo., Sept. 19-21, 1942. The second wartime convention in Omaha, Neb., Sept. 21-23, 1943, again was a streamlined affair, with attendance restricted to 1,534 delegates, national officers, and a few key committeemen. The annual parade and the musical tournaments again were dispensed with. The outstanding declaration of the Omaha convention was its foreign relations policy. It urged United States participation in the establishment and maintenance of an organization of free and sovereign nations cooperating for the preservation of peace, and called for that cooperation to be implemented with whatever force may be necessary to prevent a recurrence of war.

Major Legislative Program. The national executive committee in Indianapolis, Nov. 18-19, 1943, designated the major legislative program of The American Legion for 1944 to be universal service in time of war, adoption of a permanent policy of universal military training, postwar planning, and adequate protection of disabled veterans of World Wars I and II and their dependents.

War Effort. Accomplishments in 1943 included: Hundreds of millions of dollars worth of war bonds and stamps sold in Legion drives; helping the Navy secure its quotas of WAVES and SEABEES; repeatedly condemning all interruptions of war production, whether due to industry or labor; earning recognition from the War Production Board that the Legion's metal scrap drives were the most valuable in the nation; launching by official government request of a nationwide "America Alert" program to impress upon all citizens that the end of the war is not in sight, that the signal for the relaxation of the war effort on the home front must come from the battlefronts, and that the necessity of protection through civilian defense is continuous until the end of the war; cooperation by 75,000 Legionnaires with the FBI against all subversive activities; creation of an American Legion postwar planning commission.

Special Services to Armed Forces. Approximately 18,000 sets of new records, 48 records to the set, were furnished to members of the armed forces for their entertainment, as the result of shellac made available through many hundreds of thousands of old phonograph records collected over the nation. More than a million decks of playing cards collected by the Legion's fun and honor society, the Forty and Eight, were distributed to service men abroad. More than 2,118,000 copies of "Fall In," a booklet of instruction and advice, went to members of the armed forces, and hundreds of thousands of copies of a booklet "At Home" to members of their families. More than 1,500 posts sent home-town newspapers to members of the armed forces. A free weekly American Legion news and picture service was inaugurated and extended to approximately 1,100 Army and Navy service publications. A comprehensive program of special services to the members of the armed forces and their families was set up, financed by an appropriation of \$250,000.

Rehabilitation. The American Legion launched a vigorous fight on behalf of disabled veterans of World War II, particularly battle casualties, to eliminate delays ranging from 3 to 11 months in the settlements of their rightful claims for government compensation following their discharges from hospitals, and for the provision of muster-out pay. It drafted an orderly program of demobilization with recommendations for muster-out pay, vocational training, and placing of honorably discharged veterans into jobs without unnecessary delays. The national rehabilitation committee recovered \$2,952,731.48 in various contested benefits for thousands of World War I and II veterans and their dependents without any cost to these beneficiaries.

Americanism. Machinery was set up for raising an Americanism endowment fund of \$10,000,000 or more by public subscription, to aid in the preservation of the American way of life.

Approximately 500,000 boys under 17 years of age were enrolled in the annual Junior Baseball program.

In 18 Boys' States, more than 8,000 boys selected for leadership qualities received training in civic government by setting up and performing the functions of a mythical 49th State. Students from 47 States, numbering 120,000 participated in the national high school oratorical contest on the U.S. Constitution and Bill of Rights. More than 11,000 medals were awarded through posts and Auxiliary units to public school pupils outstanding in scholarship and leadership qualities, and 3,000 Boy Scout troops were sponsored.

Child Welfare. A program of visual parent education in the wartime care of children was launched to combat the spread of juvenile delinquency. The known total of \$2,364,484 was expended in emergency financial aid to 493,999 needy children, mostly for food, clothing, and medical treatments; aid was extended to needy children of World War II veterans.

Membership. During 1943 the Legion reached a new high in membership. On Dec. 31, 1943, there were 1,172,971 members. The total included more than 100,000 honorably discharged World War II veterans. Posts numbered 11,941, a new high. The Auxiliary enrolled a membership of 534,630 in 9,375 units. The Sons of The American Legion closed the year with 37,267 members in 3,488 squadrons. The Forty and Eight membership climbed to a new peak with 48,971 members in 717 voitures. The Eight and Forty pushed to a new high with 8,300 members in 300 salons.

National Commander for 1943-44: Warren H. Atherton of Stockton, Cal. National headquarters are at 777 North Meridian Street, Indianapolis, Ind. Legislative, rehabilitation, and employment director offices are maintained in the Legion-owned building at 1608 K St., N.W., Washington, D.C.

The American Legion has two national publications, *The American Legion Magazine* and *The National Legionnaire*, with combined circulations in excess of 2,500,000, as well as approximately 300 weekly, semimonthly, and monthly State, district, county, and post news organs.

AMERICAN SAMOA. See SAMOA.

AMERICAN STATES, International Conferences of. See PAN AMERICANISM; PAN AMERICAN UNION.

AMERIPOLE. See RUBBER.

AMG. See ITALY under *History*; UNITED NATIONS.

AMMUNITION. See topics listed under MUNITIONS.

AMPHIBIOUS WARFARE. See MILITARY PROGRESS;

NAVAL PROGRESS under *Amphibious*; WORLD WAR.

AMPUTATIONS. See MEDICINE under *Refrigeration*.

ANDAMAN AND NICOBAR ISLANDS. A province of British India consisting of two groups of islands in the Bay of Bengal: (1) Andaman Islands (2,508 sq. mi.; pop. 21,483 on Apr. 1, 1941), about 120 miles south of Burma; (2) Nicobar Islands (635 sq. mi.; pop. 13,000 on Apr. 1, 1941), south of the Andaman Islands. Total area, 3,143 square miles. Total population (Apr. 1, 1941), 34,483. Capital, Port Blair. There are good harbors at Port Cornwallis, Bonington, and Nankaur. The principal products are timber and coconuts.

The islands were occupied by Japanese forces on Mar. 23, 1942, the British having previously withdrawn to the Indian mainland. Port Blair and other points held by the Japanese were attacked by British and American bombers at intervals during 1942 and 1943.

ANDARTES. See GREECE under *History*.

ANDORRA. A small republic in the Pyrénées between France and Spain, under the joint suzerainty of the French chief executive and the Spanish Bishop of Urgel. Area, 191 square miles; population, about 6,000. Capital town, Andorra. The language spoken is Catalan. Sheep rearing is the main occupation of the people. There is a governing body called the council-general consisting of 24 members (12 elected every 2 years). The council-general nominates the First Syndic (President) and Second Syndic (Vice-President). In a decree published

Sept. 24, 1940, Marshal Henri Philippe Pétain, French Chief of State, assumed the title "co-prince of Andorra" formerly held by the President of the French Republic. In line with anti-democratic trends in France and Spain, universal suffrage was abolished in 1941 and electoral rights restricted to heads of families. When the German Army occupied southern France in mid-November, 1942, the troops arriving at the Andorran frontier announced that they had received orders to respect the integrity of the little republic.

ANESTHESIA. See MEDICINE.

ANGLO-AMERICAN CARIBBEAN COMMISSION. See CARIBBEAN COMMISSION.

ANGLO-EGYPTIAN SUDAN. A British-Egyptian condominium in northeast Africa. Area, 969,600 square miles; estimated population, 6,342,477 including 53,625 nonnatives. Chief towns: Khartoum (capital) 44,950 inhabitants, Omdurman 116,196, Khartoum North 91,530, Atbara 19,757, Port Sudan 18,554, and El Obeid 17,300.

Production and Trade. Cotton (49,600 metric tons of ginned cotton and 89,300 metric tons of cottonseed produced during 1940-41) and gum arabic (80 per cent of world's supply) are the principal export products. The chief grain crops are great millet (the staple food of the Sudanese) and bulrush millet. Other products: sesamum, groundnuts, dates, vegetable ivory, mahogany, ghee, shea nuts, salt, and gold. Livestock (1938): 2,700,000 cattle, 2,500,000 sheep, 2,000,000 goats, 420,000 camels, 75,850 asses, and 23,000 horses. Trade (1941): There was a large increase in imports, part of which was transit trade. Exports rose to the record high of £E8,500,000 of which larger shipments of cotton to Great Britain and India and the supply of livestock to Egypt accounted for most of the increase over 1940. The exchange (free rate) of the £E (gyptian) averaged \$4.135 for 1941.

Communications. In 1942 two new roads linked the provinces of Darfur and Bahr el Ghazal with the seaport of Duala, French Equatorial Africa. A military railway from the Sudan to Eritrea was under construction during 1942. At the end of 1940 there were 14,240 miles of roads, 1,991 route miles (3.5 ft. gauge) of railway, 2,325 route miles of river transport, 5,854 miles of telephone and telegraph routes, and 23 wireless stations. Shipping (1938): 746,591 tons entered and cleared Port Sudan.

Finance. Budget (1941-42): revenue £E4,066,172, expenditure £E4,639,184. Important features of this budget were the withdrawal of the Egyptian subsidy, and the extension of financial assistance by the British government for the Sudan Defense Force. Public debt (1939) U.S. \$33,580,463.

Government. The Governor General is appointed by Egypt with the assent of Great Britain (Anglo-Egyptian Convention of 1899; reaffirmed by the Anglo-Egyptian Treaty of 1936). Ordinances, laws, and regulations are made by the Governor General in council. Governor General, Lieut. Gen. Sir Hubert Huddleston (appointed Oct. 16, 1940).

ANGLO-IRANIAN OIL COMPANY. See IRAN under *History*.

ANGOLA (Portuguese West Africa). Area, 488,000 square miles. Population (1940), 3,738,010 (3,665,829 natives, 44,083 Europeans, 28,305 half-castes, and 63 others). Chief towns: Nova Lisboa (capital), Loanda, Benguela, Mossamedes, Lobita, and Malange. Education: 73 primary, 2 secondary, and 13 professional schools.

ГИМН СОВЕТСКОГО СОЮЗА

1 Со - юз ме руши мый рес-пуб-лик сво-бод-ных сплоти-
 -ти ла на ве-ки ве-ли-ка-я Русь Да здравствует со-ю-дан-ный
 во-леи на-ро-дов ве-ли-кий, мо-гу-щий Со-вет-ский Союз!
 Сла-ва-ся о-те-чество на-ше сво-бод-ное
 дру-же-би на-ро-дов на-деж-ный о-плот! Зна-мя со-вет-ско-е
 зна-мя на-ро-да-но-е пусть от по-бе-ды к по-
 -бе-де ве-дет! 2. Сколь пусть от по-бе-ды к по-бе-де ве-дет!

Property of Am-Rus Music Corp., N.Y.

ANTHEM OF THE SOVIET UNION

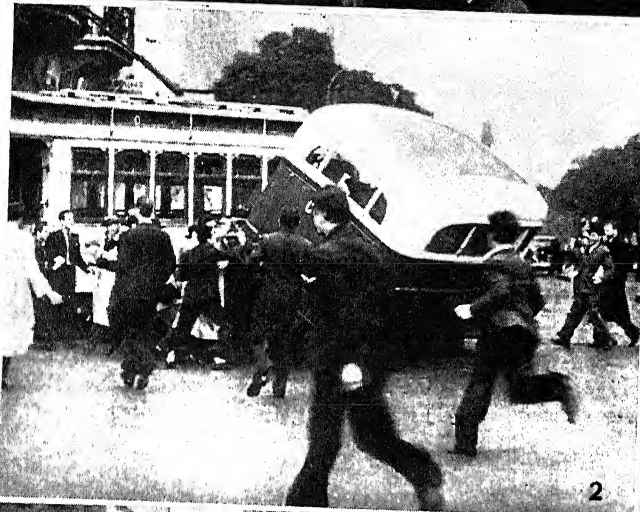
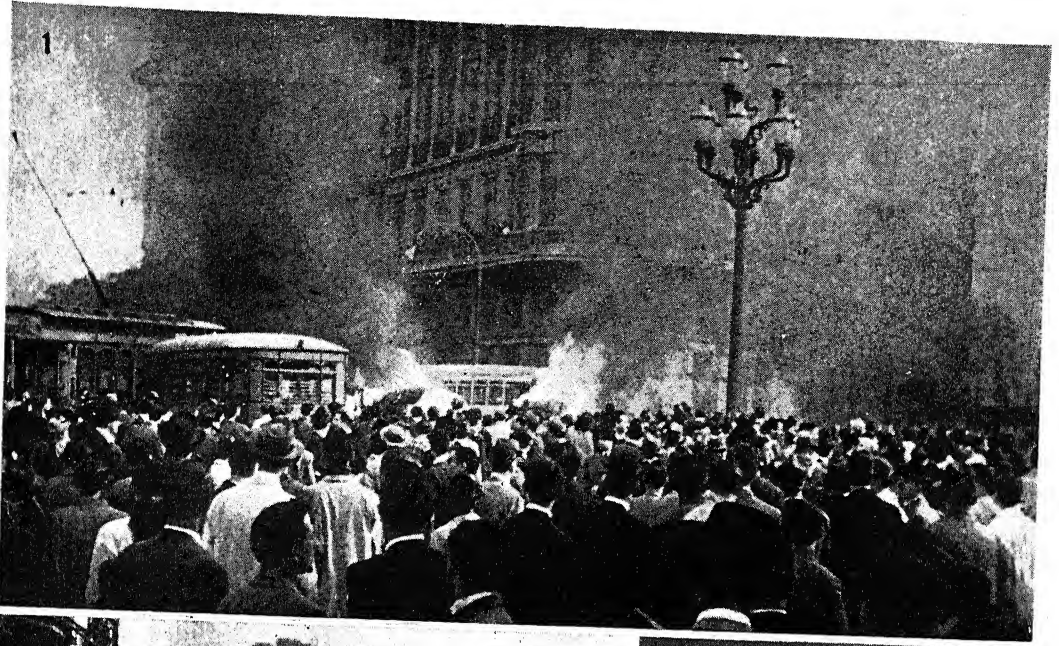
(For translation see the accompanying article "Anthem.")

Allegro 1/2 = 88 to 92. Max Raphael Becker.

The manuscript shows a full orchestral arrangement with staves for Flute, 3rd Flute, Clarinet, Bassoon, Trumpet, Horn, and Tuba. The notation is dense and handwritten, with various musical markings and dynamics.

A MILLION-DOLLAR MANUSCRIPT

The manuscript of Arturo Toscanini's arrangement of "The Star Spangled Banner" was sold for \$1,000,000 at a War Bond auction held on April 25 by the National Broadcasting Company Symphony Orchestra.



Press Association, Inc.



REVOLT IN ARGENTINA

Although the revolution which overthrew the Castillo government was almost bloodless, street mobs (1-2) in Buenos Aires let off steam by overturning trucks and burning them. 3. Gen. Pedro Pablo Ramírez, who succeeded Ramón S. Castillo as President. 4. Disorder in Capital is quelled.

Production and Trade. Maize (316,800 metric tons produced in 1938-39), manioc (301,590 short tons in 1939), sugar (equal to 40,600 tons refined, 1940-41), coffee (20,000 tons, 1940-41), wheat (12,000 tons, 1940-41), palm oil (5,000 tons exported in 1940), were the chief crop products. Other crops were sisal, cacao, cotton, coconuts, and tobacco. Minerals produced included diamonds, salt, copper, and lignite. Trade (1941): imports 233,205,000 angolares (textiles, coal, and foodstuffs were the main items); exports 434,011,000 angolares (diamonds, coffee, maize, sugar, and wax were the principal items). The angolar averaged \$0.0400 for 1941.

Communications. There were 1,442 miles of railway open for traffic, 22,708 miles of good roads, 20,713 miles of secondary roads, 8,112 miles of telegraph lines, 3,501 miles of telephone lines, and 12 wireless stations.

Government. The ordinary budget for 1942 balanced at 262,525,303 angolares. Public debt (Dec. 31, 1941), 1,049,303,248 angolares, including 836,228,873 angolares owed to Portugal. Angola consists of 5 provinces and 14 administrative districts. The government is headed by a governor general and he is assisted by an advisory council of appointed and ex officio members in addition to members elected by economic organizations. All legislative measures must be referred to the advisory council. Governor General, Comm. Alvaro de Freitas Morna.

ANGUILLA. See under **LEEWARD ISLANDS.**

ANHALT. See **GERMANY** under *Area and Population.*

ANIMALS, ANIMAL PRODUCTS. See **DAIRYING; FISH AND WILDLIFE SERVICE; LIVESTOCK; HIDES; FOOD INDUSTRY;** articles on countries under *Production or Agriculture.* For the **Bureau of Animal Industry**, see **AGRICULTURE, U.S. DEPARTMENT OF.**

ANNAM. See **FRENCH INDO-CHINA.**

ANSCO COLOR FILM. See **PHOTOGRAPHY.**

ANTHEM, Russian National. The Soviet Union officially adopted a new national anthem in 1943 (see **U.S.S.R.** under *History*). It was announced that the "Internationale" would continue to be used as a workers' song. The words of the new anthem were written by Sergei Mikhalkoff and E. L. Gistan. The following is a translation by the American poet Louis Untermeyer.

HYMN OF THE SOVIET UNION

1.

Republic forever, the land of the free,
Joined in love and in labor for all men to see;
Long live mighty Russia, the union supreme
As the hope of the people, their work and their dream.

Chorus:

Long may she live, our motherland,
Long may her flag be over us;
Flag of the Soviets, our trust and our pride,
Ride through the storm victorious.
Lead us to visions glorious—
Flag of a people in friendship allied.

(Repeat)

2.

Through terror and darkness the sun shines today,
For Lenin and Stalin have lighted the way;
We crushed the invader, we hurled back the foe,
And our armies in triumph will sing as they go:

Chorus:

Long may she live, our motherland, etc.

Copyright 1944 Broadcast Music, Inc.

ANTI-FREEZE MIXTURES. See **NATIONAL BUREAU OF STANDARDS.**

ANTIGUA. An island presidency of the British Leeward Islands. Area, 171 square miles, including its dependent islands (Barbuda and Redonda, 63 sq. mi.). Total population (1941), 39,036. St. John (10,000 inhabitants), the capital of Antigua, is the seat of government of the Leeward Islands. The chief products are sugar (21,979 tons, 1942) and cotton. Trade (1941): imports £326,483; exports £266,535. Finance (1941): revenue £161,162; expenditure £133,111; public debt £75,810. Antigua, in addition to representation in the federal legislative council of the Leeward Islands, has a local government consisting of an executive council (presided over by the governor) and a legislative council (presided over by the administrator) of 11 members. Administrator, H. Boon (appointed Apr. 2, 1940).

United States naval and seaplane bases were established in Parham Harbor and along the shoreline of Judge's Bay. The base sites, leased for 99 years, were approved by the Antigua legislative council on Dec. 20, 1940, and confirmed in a formal treaty signed in London, Mar. 27, 1941, by the British and U.S. Governments (see 1943 **YEAR BOOK**, p. 33).

ANTIMONY. Although the United States has always leaned heavily upon imports for its antimony requirements, domestic deposits constitute a bulwark available in case of necessity.

The supply and demand for antimony, so far as the United States is concerned, is shown in the adjoining War Production Board table.

ANTIMONY SUPPLY AND DEMAND 1943-44

Supply of Antimony	(Contained Antimony)	
	1943 (short tons)	1944 (Est.) (short tons)
(a) <i>Stocks</i>		
Government, Ore.	1,384	14,800
Government, Metal & Products	11,279	13,000
Private, Ore.	4,789	4,500
Private, Metal & Products...	4,614	3,790
(b) <i>Production</i>		
Imports		
Mexico	13,200	12,000
South America and others ..	19,500	1,250
Domestic production	5,124	4,000
Secondary production	18,000	12,000
Total Supply	77,890	65,340
Demand for Antimony		
Domestic primary	23,500	24,000
Domestic secondary	18,000	12,000
Foreign	300	500
Total Demand	41,800	36,500
Reserve, December 31	36,090	28,840

Consumption rose sharply early in 1943. For the first seven months, 4,896 short tons were consumed in the United States compared to 2,742 short tons in the last seven months of 1942. This increased use is at least in part attributable to the need for large quantities of antimony oxide for the manufacture of flameproofing compounds. Its other big use, in alloys, results from two properties: (1) hardness—when antimony is alloyed with lead, or lead and tin, it imparts hardness and reduces ductility; (2) expansion on cooling. As a lead hardener, antimony finds its way into electric cable jacketing and lead plates of storage batteries, which would tend to stretch, sag, and buckle were not antimony added. A better known use, as an alloy for type metal, comes from its ability to prevent type slugs from contracting upon cooling, thus blurring the type outline. The crystalline structure characteristic of antimony produces desirable characteristics in bearing metals, such as babbitt, in addition to imparting hardness. It also goes into several specialized alloys with lead, tin, copper, and nickel.

The entire output of Bolivian ore, the world's principal source of supply, went to the United States in 1943, as did the ore mined in Mexico, second largest world producer. China, the former world leader, has little hope of regaining its markets in the postwar period. In the United States, the Yellow Pine Mine of central Idaho, known principally as a tungsten bonanza, mined the most antimony ore. Other domestic production comes from the Sunshine Mine and the Coeur d'Alene Mines Corp. in the Idaho panhandle, and in lesser amounts from California, Nevada, Arizona, and Alaska.

Texas Mining & Smelting Co. at Laredo, accounts for approximately 90 per cent of total metal output. Antimony metal usually is marketed in units 10 in. by 10 in. by 2½ in., variously known as blocks, bars, and pigs. Average weight is about 55 lb. to the bar. On December 4, the Office of Price Administration translated the existing ceiling of 14 cents per lb., f.o.b. Laredo, for 99.0 per cent metal, which prior to the General Maximum Price Regulation had been set by voluntary agreement, into Maximum Price Regulation 497, also blanketing in 15 antimony compounds. WPB released antimony from allocation Jan. 1, 1944.

CHARLES T. POST.

ANTITRUST DIVISION. A Division of the U.S. Department of Justice which enforces the antitrust laws of the United States and handles legal proceedings connected with some 30 other major Acts of Congress involving the regulation of business activity. Under an arrangement with the Board of Economic Warfare, the Division in 1943 conducted investigations and made reports on industrial and economic conditions bearing on the military situation. The Small Business Section received complaints and appeals from small business concerns and, when justified, represented their interests before other government agencies. Assistant Attorney General Wendell Berge is in charge of the Division. For antitrust actions in 1943, see LAW: MUSIC; NEWSPAPERS.

APPROPRIATIONS. See PUBLIC FINANCE; UNITED STATES under *Congress*; countries under *History*; also the subject, as LEND-LEASE, NAVAL PROGRESS.

AQUEDUCTS. City water supply systems are becoming a wider field for aqueduct construction, since more and more of them have to seek new and more distant sources. In most cases such aqueducts are of the pipeline type, but tunnels and other works are included. The 85-mile Delaware River aqueduct tunnel, at New York, is noted under WATER SUPPLY AND PURIFICATION. Other examples are Baltimore, with a conduit to the Patapsco River and another 12 miles across the city, and Wilmington, N.C., with an 8-mile or 30-mile conduit, according to alternative plans. Salt Lake City is to have a 40-mile aqueduct for domestic, industrial, and irrigation service, its population having been increased 50 per cent by military and industrial activities. Work was ordered stopped in December, 1942, by the WPB, but resumed in October, 1943, for laying 2½ miles of 69-in. concrete pipe. Of the 40-mile length, nine miles are completed.

Similar projects are covered in many postwar plans. Surface aqueducts (canals and pipelines), being conspicuous from airplanes, have a new hazard in the development of aerial bombing. Experiments are being made to partially conceal them in emergency by smoke screens; or permanently,

in the case of pipelines, by camouflage painting in colors harmonizing with the surroundings (and therefore changed with the seasons) or by covering some portions with earth.

Of aqueducts in the irrigation and hydraulic projects of the U.S. Bureau of Reclamation, the following may be noted, in addition to the Salt Lake City aqueduct mentioned above. Those marked (*) are still under construction; the others are halted by order of the War Production Board.

- (1) Colorado—Big Thompson project,* Colorado, with 11 miles completed on the 13-mile Continental Divide tunnel.
- (2) Provo River project, Utah, with 2¾ miles completed on the 6-mile Duchesne tunnel.
- (3) Madera 37-mile canal* on the Central Valley project, California; 8 miles completed and 29 miles under contract.
- (4) Enlarging 22 miles of the Provo Reservoir canal,* Utah; to be completed in 1945.
- (5) Heart Mountain canal, 28 miles, on the Shoshone project, Wyoming; completed in 1943.
- (6) Casper main canal, 62½ miles, on the Kendrick project, Wyoming; nearly completed but work stopped.
- (7) Pilot canal, 38 miles, Riverton project, Wyoming; nearly completed.
- (8) Enlarging the 9-mile Weber-Provo diversion canal,* on the Provo River project, Utah.
- (9) Roza main canal,* 95 miles, on the Roza division of the Yakima project, Washington; 59 miles completed.
- (10) Coachella branch,* 130 miles, of the All-American canal, California; 86 miles completed and 27 miles in progress.

In South Australia, a 240-mile pipeline is reported under construction to supply water from the Snowy River for domestic, industrial, and irrigation purposes in the Whyalla district on Spencer Gulf. Several projects of this type, involving dams and aqueducts, are in prospect for postwar developments in Australia and Africa.

Of numerous pipeline aqueducts for the transport of crude oil, refined products, gasoline, and natural gas, a conspicuous example is that under construction in Canada by the U.S. Army, from wells at Fort Norman to Whitehorse, on the Alaska Highway, 600 miles, to serve airports and defense stations in Alaska. Pipe, machinery, and equipment were carried 800 miles by barge and portages from Fort Smith on Great Slave Lake, to Fort Norman, on the Slave River. The noted "Big Inch" 24-in. pipeline from Longview, Texas, to the Atlantic coast, was completed to Phoenixville, Pa., on July 19. Thence two 20-in. lines diverge to Marcus Hook, Philadelphia, and Bayonne, N.J., on New York harbor, making a total length of nearly 1,400 miles.

In the 24-in. line, with 25 pumping stations, the rate of oil flow is about 4 miles an hour, reduced to 3 miles in the smaller branches. Smaller lines paralleling the "Big Inch" from Texas to tank-car loading stations in Illinois and Indiana, 840 miles, were under construction, with prospects of extension to the Atlantic coast. The government concern called the War Emergency Pipe Lines, Inc., completed ten of its projects and had others under way. The line across Florida, from Carabelle to Jacksonville, 185 miles, was completed in January, connecting tank barge services on the Gulf and Atlantic intracoastal waterways. A short line connecting two older lines completed a new route from the mid-west to the Atlantic coast. The line from Baton Rouge to Greensboro, N.C., was extended to Richmond, Va., 175 miles, in June, in order to deliver oil to barges serving the New England states. A proposed line from Albany to Boston was disapproved by the U.S. Government as unnecessary.

Some pipelines were under way for natural gas, which differs from oil in that it must be kept confined under pressure in its transport from the wells to the consumer. Nevertheless, the transportation

distance is increasing. In October, 1943, a contract was let for a 1,200-mile natural-gas line from Corpus Christi, Texas, to Cornwell, W.Va. An 82-mile line was built in Ohio on account of the decline in natural-gas supply in the Akron industrial district. An unusual development in pipeline construction was the carrying of pipe in suspension spans up to 1,000 ft. in length, thus saving nearly ten miles of surface construction in rough country. Record-breaking speed was made in the construction of some main pipelines, but strikes caused considerable delays on other lines. See **WATER SUPPLY AND DAMS**.

E. E. RUSSELL TRATMAN.

ARAB FEDERATION. See **EGYPT** and **IRAQ** under *History*.

ARABIA. A large peninsula in southwestern Asia. Area, 1,000,000 square miles; population, said to be 10,000,000. For the various divisions of Arabia see below. Arab countries outside the Arabian peninsula are presented in the separate articles on **EGYPT**, **IRAQ**, **PALESTINE**, **SYRIA** and **LEBANON**, and **TRANS-JORDAN**.

Aden. A British crown colony at the southern tip of Arabia, about 100 miles east of the Red Sea. Included in the colony is the island of Perim (5 sq. mi.; pop., 2,346) in the southern entrance to the Red Sea. Total area, 80 square miles; total population (1931), 48,338, excluding the military forces. Chief towns: Aden (capital), 32,490 inhabitants (1931 census); Sheikh Othman, 12,167. Education (1941): 69 schools and 3,200 students. Aden has a fortified naval base, a free port, and is a fueling station for ships. Early in 1940 the port was made a contraband control port for shipping. The transit trade is important. Local products are salt, soap, cigarettes, dhows, and cured fish. Trade (1939): Rs68,566,887 for imports and Rs39,095,919 for exports (rupee averaged \$0.3328 for 1939; \$0.3016, 1940; \$0.3014, 1941). During 1939 the merchant shipping that entered the port totaled 8,005,764 net tons. Finance (1941-42): Rs4,671,758; expenditure Rs3,953,932. Aden became the colony of Aden on Apr. 1, 1937. The government is administered by a governor, aided by an executive council. Governor and Commander in Chief, Sir John H. Hall (appointed Oct. 24, 1940).

Aden Protectorate. The region in southern Arabia extending east, north, and west of the colony of Aden. Area, 112,000 square miles; estimated population, 600,000, mostly Arabs. It is divided into two parts: (1) Western Aden Protectorate, comprising 19 sultanates of which the premier chief is the Sultan of Lahej. (2) Eastern Aden Protectorate, comprising the Hadhramaut (made up of the Qu'aiti State of Shihr and Mukalla, and the Kathiri State of Seiyun), the Mahri sultanate of Qishn and Socotra, the Wahidi sultanates of Bir'Ali and Bili-haf, and the sheikdoms of 'Irqa and Haura. The Sultan of Qishn and Socotra resides on the island of Socotra (1,400 sq. mi.; pop., 12,000; chief village, Tamarida), 150 miles from Cape Guardafui, Africa. Dates, gums, tobacco, and butter are the main products. There are large numbers of sheep, cattle, and goats. The local rulers have protective treaty relations with Great Britain and manage their own affairs subject to general supervision by British officials who are under the control of the governor of Aden.

Bahrein Islands. The chief islands of this state in the Persian Gulf are Bahrein, Muharra, Nebi Saleh, and Sitra. Total area, 231 square miles; population, 120,000, of whom 75 per cent belong to

the Shia sect, and the remainder to the Sunnis. Capital, Manama (25,000 inhabitants) on the island of Bahrein, is joined to the town of Muharra (25,000 inhabitants) by a causeway. Chief products: pearls, crude petroleum (936,000 metric tons in 1941), boats, sailcloth, reed mats, and dates. Fine white donkeys are raised. Trade (1939-40): Rs22,159,030 for imports and Rs12,976,230 for exports (excluding petroleum). The rupee averaged \$0.3014 in 1941; \$0.3016, 1940; \$0.3328, 1939. Ruler (since Feb. 3, 1942), Sheik Sulman (in treaty relations with Great Britain).

Kuwait (Koweit). An Arab state south of Iraq. Area, 1,930 square miles; population, 60,000, exclusive of some Bedouins. Capital, Kuwait. Pearls, wool, dhows, and horses are exported. Trade (1937-38): imports Rs5,477,488; exports Rs2,320,075 (rupee averaged \$0.3659 for 1938; \$0.3733 for 1937). Oil was discovered during 1938. Kuwait is in treaty relations with Great Britain, which is represented by a political agent. Ruler, Sheik Sir Ahmed ibn Jabir al Subah (succeeded Feb. 23, 1921).

Muscat and Oman. An independent sultanate in southeastern Arabia. Area, 82,000 square miles; estimated population, 500,000, mainly Arabs, but there is a strong infusion of Negro blood near the coast. Chief towns: Muscat, the capital, 4,200 inhabitants; Matrah, 8,500. On the northern coast of the Gulf of Oman is the port of Gwadar which is a possession of the sultanate. Chief products: dates, pomegranates, limes, and dried fish. Camels are raised by the inland tribes. Trade (1938-39): imports Rs4,876,193; exports Rs3,331,939. Muscat is the only port of call for steamers. Pack animals are used for inland transport. There is a motor road connecting Muscat and Matrah and extending to Kalba. Roads suitable for motor vehicles join Hagar, Boshier, and Qariyat with Matrah. The annual revenue is estimated at Rs700,000. A new treaty of friendship, commerce, and navigation was signed with Great Britain on Feb. 5, 1939. Sultan, Sir Saiyid Said bin Taimur (succeeded Feb. 10, 1932).

Oman, Trucial. The Arab states (Abu Dhabi, Ajman, Debai, Shargah, Ras al Khaimah, and Umm ul Qawain) on the Persian Gulf. Area, 6,023 square miles; population, 75,000 to 85,000. Chief capital, Abu Dhabi. Pearls are the chief export from the coast ports. The rulers of the six states are in treaty relations with Great Britain, which is represented by a resident agent who is under the control of the British political resident at Bushire, Persia.

Qatar. An Arabian sheikdom occupying a peninsula in the Persian Gulf. Area, 8,500 square miles; population, 25,000. Capital, El Beda. Relations with Great Britain are regulated by the Treaty of Nov. 3, 1916. Sheik, Abdullah ibn Jasim al Thani (acceded in 1913).

Saudi Arabia. An Arab state occupying the northern and central part of Arabia, formerly known as the Kingdom of Hejaz and Nejd. Pending the introduction of a single constitution for the whole country, there are two systems of government—one for Nejd and one for Hejaz. Ruler, King Abdul Aziz ibn Abdur Rahman al Faisal al Saud.

Nejd occupies a large part of central Arabia, including the Nafud and Dahna deserts, and reaches eastward to the Persian Gulf. Area (estimated), 550,000 square miles. Population (estimated), 3,000,000. Chief towns: Riyadh (capital), Hufuf, Mubarraz, Shaqra, Anaiza, Buraida, Hail, Jauf, Sakaka, and Hauta. Chief products: dates, wheat, barley, fruit, hides, wool, clarified butter, Arab cloaks, and crude petroleum (804,000 metric tons

in 1941). Large numbers of camels, horses, donkeys, and sheep are raised. Trade: imports include piece goods, sugar, coffee, tea, rice, and motor vehicles; exports, except for petroleum, are very small. Nejd is governed in a patriarchal manner by the King whose eldest son (Emir Saud), the heir apparent, acts as Viceroy and Commander-in-Chief of the military forces.

Hejaz extends along the western coast from Trans-Jordan to Asir. Area, 150,000 square miles; population (estimated), 1,500,000. Chief towns: Mecca, the capital and holy city of Islam, 80,000 inhabitants; Jidda, the seaport for Mecca, 40,000; Medina, the site of Mohammed's tomb, 20,000; Yenbo, the seaport for Medina. Chief products: dates, butter, honey, fruit, wool, and hides. The annual pilgrimage of Moslems from abroad to Mecca and Medina is the chief source of income. Hejaz is governed under the constitution of Aug. 26, 1926, and later amendments. There is a council of ministers presided over by the King's second son, Emir Faisal, who is minister of foreign affairs, and Viceroy during the King's absence.

Asir, a province south of the Hejaz, was incorporated in the kingdom of Saudi Arabia during 1933. Area, 14,000. Population (estimated), 750,000. Capital, Sabya, 20,000 inhabitants.

Yemen. An independent Arab kingdom in southwestern Arabia. Area, 75,000 square miles; population, 3,500,000. Chief towns: San'a (capital), 25,000 inhabitants, Hodeida, 40,000, Taizz, Ibb, Yerim, Dhamar, Mocha, Loheiya. Chief products: coffee, barley, wheat, millet, and hides. Ruler, Imam Yahya b. Muhammed b. Hamid el Din.

HISTORY

The policy of benevolent neutrality toward Great Britain and her allies adopted by King Abdul Aziz Ibn Saud of Saudi Arabia during the critical period of World War II strengthened his position as the dominant figure in the Arab world when the war turned against the Axis. This enabled Ibn Saud in 1943 to intervene more actively in the two major issues confronting the Arab peoples. He assumed a leading role in the movement for the federation of the Arab states, and he came out strongly in opposition to the Zionist campaign for a Jewish national state in Palestine (which see).

Ibn Saud's opposition to the Zionist program and his warning that it would "inevitably lead to more trouble" were set forth in a formal statement to a representative of *Life Magazine* at Riyadh on Mar. 21, 1943. In the same interview he expressed his belief that with Allied aid the Arabs would be united after the war. The latter project offered the King an opportunity to extend his power far outside the boundaries of his desert domain. However other ambitious Arab leaders—Premier Nahas Pasha of Egypt, Emir Abdullah of Trans-Jordan, and Premier Nuri es-Said of Iraq—were seeking to gain control of the federation movement. Ibn Saud sent agents and observers to the other Arab states to keep abreast of developments. In October he dispatched his private secretary and his acting Foreign Minister to Cairo to discuss federation with Nahas Pasha. According to the Egyptian press, Ibn Saud's delegates demanded that the Arab leaders press for an immediate solution of the Palestine question, while Nahas Pasha considered it inadvisable to force a show-down on the issue until after the war. Meanwhile Ibn Saud's political influence had been increased further by the election of his close friend, Shukri Quwatly, as president of the Syrian Republic.

A year after Ibn Saud severed diplomatic relations with Italy, the Imam Yahya of Yemen late in February, 1943, was reported to have ordered the internment of all Italians and Germans in his domains for the duration of the war. It was announced October 16 that the British and Saudi Arabian governments had renewed the Treaty of Jidda for seven years. This treaty, signed in 1927, recognized Saudi Arabia's full independence, pledged both parties to prevent their territories from being used as bases for hostile activities against each other, and bound Ibn Saud to maintain peaceful relations with the small Arab states on the Persian Gulf under British protection.

The official visit made to Ibn Saud's capital at Riyadh in 1942 by Alexander Kirk, U.S. Minister to Egypt and Saudi Arabia, was followed on Apr. 19, 1943, by President Roosevelt's action in authorizing the extension of lend-lease aid to Saudi Arabia. In May James S. Moose Jr. was appointed as the first U.S. Minister to be permanently stationed in Arabia. In October Emir Faisal, Ibn Saud's second son and Foreign Minister, visited the United States as guest of the U.S. Government, accompanied by his brother, Emir Khalid, and the Saudi Arabian Minister to London. During their presence in Washington it was revealed that the U.S. Petroleum Reserves Corporation, a Federal agency, was negotiating with the California Arabian Standard Oil Company for a participating interest in the development of the company's vast oil reserves in Saudi Arabia. Brig. Gen. Patrick J. Hurley had visited Saudi Arabia the previous spring as President Roosevelt's representative to study the growing American oil industry centered at Dhahran on the Persian Gulf coast. He was said to have arranged for Emir Faisal's visit. According to some oil experts, the American oil concessions in Saudi Arabia contained very large potential reserves.

U.S. lend-lease aid to Saudi Arabia took the form of pumping machinery for the expansion of irrigation projects. A thousand acres of arid land at El Kharj, 54 miles south of Riyadh, were placed under cultivation with American pumping machinery and with the advice and assistance of the U.S. agricultural mission which visited Saudi Arabia in 1942. Other projects were under development in line with Ibn Saud's program for the permanent settlement of the nomadic tribesmen on irrigated lands. The program was spurred by the great reduction of food imports caused by the war and especially the cutting off of the country's major source of income—the Moslem pilgrimages to the holy cities of Mecca and Medina.

Failure of the crops in Aden Protectorate led the Governor of Aden in June to request 20,000 tons of millet and £30,000 for famine relief during the ensuing twelve months. The Middle East Supply Center in Cairo arranged to supply the millet.

See EGYPT under *History*.

ARABS. See ALGERIA, EGYPT, FRANCE, and TUNISIA under *History*.

ARCHAEOLOGY. It is astonishing that anything can be reported in the way of archaeological discovery. It is however possible to record that Dr. Nelson Glueck, who is director of the American School of Oriental Research at Jerusalem, has been able to conduct excavations in the valley of the Jordan which brought to light the ruins of some 70 villages dating from the middle of the 4th millennium B.C. down to the 12th century of the Christian era. The results of these explorations reveal that between

the 13th and the 6th centuries before Christ there were about 35 villages distributed over some 35 miles of the eastern side of the valley of the Jordan. So far as can be made out the population of this area ran to 35,000 or 40,000 people. Evidence was gathered which confirms the statement in Genesis XIII, 10, "And Lot lifted up his eyes, and beheld all the plain of Jordan, that it was well watered everywhere, before the Lord destroyed Sodom and Gomorrah."

At a place in Iraq, known as Aqer Quf, 18 miles to the west of Baghdad, the Iraq Department of Antiquities conducted excavations in the great mound. The season's work resulted in the clearing out of 12 rooms of a temple in which were found five inscribed pivot stones together with a number of inscribed tablets. These finds supply additional information in reference to a previously uncertain period in the history of Mesopotamia. From the material recovered it is now possible to identify Kurigalzen as the third king bearing that name and to establish the fact that he ruled Mesopotamia for a period of 20 years after Tutankhamen of Egypt had died. Signs of fire suggest the possibility that at a later date the place was burned by the Assyrians.

Coming to America, excavations conducted in preparing the approaches for the Ochomozo bridge of the Inter-American Highway near Rivas in Nicaragua, have brought to light idols, grinding stones, and vase fragments dating in the time of Early Central American Culture. Near Arequipa, in Peru, have been found the ruins of a pre-Inca city. Here, on a mountain 13,000 feet in height, the explorers found remains of streets and public squares. At a depth of some five feet many fragments of pottery mortars came to light. The discovery of well-preserved remains of stone mortars dates the place as pre-Inca, inasmuch as the Incas did not use such mortars.

OLIVER S. TONKS.

ARCHITECTURE. This article has been suspended pending the resumption of non-war construction. **AREAS, Bureau of.** See FOREIGN ECONOMIC ADMINISTRATION.

ARGENTINA. A federal republic of South America, consisting of 14 provinces, 10 territories, and the federal district, which includes the capital, Buenos Aires.

Area and Population. Land area, 1,079,965 square miles. Estimated population, 13,709,238 in 1942 (7,885,237 at 1914 census). Estimated populations of chief cities in 1942 were: Buenos Aires, 2,408,900; Rosario, 518,515; Avellaneda, 245,801 (1940); Córdoba, 273,852 (1940); La Plata, 199,904 (1940); Tucumán, 149,214 (1941); Santa Fé, 150,634; Bahía Blanca, 115,016 (1940); Mendoza, 102,129. The population is almost entirely of European (chiefly Spanish and Italian) extraction, except for about 400,000 persons of Indian and mixed descent. About 77.4 per cent are Argentine-born. The foreign population in 1941 totaled about 2,500,000, of whom some 779,000 were Italians, an almost equal number Spaniards, and about 236,756 Germans. Living births in 1941 numbered 304,062 (23.9 per 1,000); deaths, 136,050 (10.7 per 1,000); immigrants by sea, 12,132 (2,648 from Spain).

Defense. As of Jan. 1, 1941, Argentina had an estimated 49,705 men in active army service, including conscripts; an additional 2,023 men in the military and naval air forces, with about 272 planes; a trained army reserve of 282,503 men; and

a naval force of 2 old battleships (recently modernized), 3 cruisers, 4 old coast defense vessels, 15 destroyers, 3 submarines, 14 mine-sweepers, and various auxiliary craft.

Education and Religion. Illiteracy fell from 22 per cent of the voting population in 1930 to an estimated 16 per cent in 1939 (less than 2 per cent in the federal district). Educational statistics: Primary, 14,241 schools with 2,024,954 pupils in 1941; secondary, 916 schools with 184,057 pupils in 1942; universities, six with 39,595 students in 1941. The Roman Catholic Church is supported by the state; all other faiths enjoy freedom of conscience.

Production. Agriculture, stock raising, and manufacturing are the principal occupations. Before the war, agricultural and pastoral products normally accounted for more than 90 per cent of all exports. Yields of the chief crops were (metric tons): Wheat, 5,400,000 in 1942-43; linseed, 1,500,400 in 1942-43; corn, 1,900,000 (estimated) in 1942-43; rice, 107,750 in 1942-43; cotton, 80,869 in 1941-42; barley, 789,000 in 1941-42; oats, 700,600 in 1942-43; potatoes, 1,056,000 in 1941-42; cane sugar, 405,825 in 1941. The 1942 wine output was 6,916,410 hectoliters (hectoliter equals 26.42 U.S. gal.); maté, 158,998,000 lb. in 1941.

Beef cattle slaughtered at frigoríficos (packing plants) during 1942 numbered 3,284,217 (3,552,260 in 1941) and exports of fresh, boneless, and canned beef totaled 740,234 metric tons on a fresh-beef basis (775,112 tons in 1941). The number of swine marketed in 1942 was 2,089,000 (1,411,300 in 1941) and exports of pork products were 83,373 metric tons (41,541 in 1941). Sheep slaughtered in frigoríficos in 1941 numbered 5,481,050. Output of dairy products in 1942 (metric tons): Butter, 41,228; cheese, 58,744; casein, 25,632. Industrial establishments in 1941 employed 785,000 persons and produced goods valued at 5,230,000,000 pesos. Meat, textiles, flour, tobacco goods, edible oils, and alcoholic beverages are the leading industrial products. Stone, ores, and minerals produced in 1941 were valued at \$183,000,000. State-owned fields produced 15,382,736 bbl. of oil, the leading mineral product, in 1942.

Foreign Trade. Imports in 1942 were valued at 1,274,148,529 paper pesos (1,276,654,533 in 1941); exports, 1,782,982,579 pesos (1,464,621,550 in 1941). The metric tonnage of 1942 imports was 4,515,461 (6,472,543 in 1941); of exports, 5,303,430 tons (6,241,313 in 1941). Of the 1942 exports, pastoral products accounted for 1,081,124,831 paper pesos and agricultural products for 384,709,508 paper pesos. Leading imports were textiles, chemicals, fuels, wood, paper, metals, iron and their various products, machinery and vehicles, foodstuffs, etc. The United States supplied 31.2 per cent of Argentina's 1942 imports, United Kingdom 18.2, Brazil 17.8, and Sweden 7.6 per cent. Of the exports, the United Kingdom took 32.7 per cent, United States 28.3, Brazil 5.9, and Sweden 4.4 per cent.

Finance. Budget estimates for the calendar year 1943 placed receipts (excluding loans) at 1,014,000,000 paper pesos (964,000,000 in 1942) and total expenditures (including debt redemption) at 1,204,000,000 pesos (1,217,000,000 in 1942). The defense budget totaled 232,000,000 pesos for 1942 and 246,000,000 for 1943. In 1941 actual non-loan receipts were 910,000,000 pesos and expenditures 1,367,000,000. The Federal debt totaled 5,499,719,000 pesos on June 30, 1941. The free market exchange rate for the paper peso was \$0.2288 in 1940, \$0.2361 in 1941, and \$0.2364 in 1942.

Transportation. Argentina in 1942 had 26,184 miles of railway lines (59 per cent British-owned and 30 per cent state-owned), 253,115 miles of highways (about 10 per cent all-weather motor roads), and nine foreign and domestic air lines providing connections among all the principal cities of Argentina and the Western Hemisphere. A new railway from Salta, Argentina, across the Andes to Antofagasta, Chile, was under construction in 1942-43. Statistics of civil air traffic in 1942: Kilometers flown, 2,247,335; passengers, 55,014; mail, 78,968 kilograms; express, 210,518 kilograms. The net registered tonnage of vessels entering Argentine ports was 6,690,000 in 1940 and 4,638,262 in 1941.

Government. The Constitution of 1853 vests executive power in a president chosen for a six-year term by 376 electors representing the provinces and the federal district. It provided for a National Congress consisting of a Senate of 30 members elected for nine years by the provincial legislatures and a Chamber of Deputies of 158 members elected for four years by universal male suffrage. One-third of the Senate retired every three years and one-half of the Chamber every two years. The governors of the provinces, elected by local suffrage, exercise extensive powers independently of the federal government. The standing of the parties in the Chamber of Deputies elected in March, 1942, was: Government bloc (National Democrats and Antipersonalist Radicals), 68; Radicals, 64; Socialists, 17; others, 9. In the Senate the Government bloc held 24 seats; Radicals, 4; Socialists, 1; others, 1. President at the beginning of 1943, Dr. Ramón S. Castillo, the former Vice President. He became Acting President on July 3, 1940, due to the illness of President Roberto M. Ortiz, and succeeded to the Presidency on June 27, 1942, upon the resignation of Ortiz. For 1943 developments, see below.

HISTORY

Presidential Campaign. The beginning of 1943 found Argentine attention concentrated upon the Presidential election scheduled for September 5. The sudden death on January 11 of ex-President Augustín P. Justo upset all political calculations. General Justo during 1942 had emerged as the leading opponent of President Castillo's isolationist foreign policies and as the chief threat to the perpetuation of his political power (see 1943 YEAR BOOK). With Justo's removal from the scene, Castillo had little difficulty in securing the nomination of his own candidate by the Concordancia, or coalition of the conservative National Democratic and Radical Antipersonalist parties, which had controlled the government since 1931.

On February 10 Castillo announced that he would not seek a second term. A week later he named Dr. Robustiano Patrón Costas, wealthy President of the Senate and a leader of the National Democrats, as his choice for the Presidency. Dr. Patrón Costas, he emphasized, would continue the Castillo policy "as regards both domestic and international affairs." Governor Rodolfo Moreno of Buenos Aires Province, an aspirant for the Concordancia nomination, rebelled at this decision but was unable to carry his political following with him into the opposition and was forced to resign as Governor on April 13. The Concordancia ticket was completed with the announcement by the Radical Antipersonalists on May 16 that they would support Patrón Costas and Manuel María de Iriondo, an Antipersonalist, as candidates for President and Vice President respectively. The Concordancia's platform, published May 31, pledged the candidates to "maintain peace by continuing the pres-

ent international policy" and to "repudiate all extremisms" in domestic politics.

Castillo's stubborn insistence upon his policy of "prudent neutrality" and nonfulfillment of the recommendations for severance of diplomatic and economic relations with the Axis adopted by the Rio de Janeiro Conference of American foreign ministers in January, 1942, loomed as the outstanding issue of the coming election. This policy grew increasingly unpopular, particularly after Chile severed relations with the Axis Powers in January, 1943, leaving Argentina completely isolated among the nations of the New World. However the President overrode criticism within his own party. Using the powers obtained under the state of siege decreed Dec. 16, 1941, he maintained his ban on discussion in the press, the radio, or other media of public information of both international questions and the application of the state of siege.

There was mounting uneasiness at Argentina's diplomatic isolation and, among military circles, at the rapid armament of Brazil and Chile with United States lend-lease aid—denied to Argentina because of her noncooperation. This trend of public sentiment, coupled with the unexpected victory of the opposition Radical party in the Entre Rios provincial election of March 22, pointed to the possible defeat of the Castillo ticket if the Radical, Socialist, and Progressive Democratic parties could unite in an anti-government coalition. The three parties agreed upon a common electoral platform calling for "active solidarity" with the United Nations, defense of the Western Hemisphere's "territorial integrity and . . . democratic institutions," and the elimination of electoral fraud, corruption, and monopolies that flourished under the Castillo Government. They also united on the Socialist demand for nationalization of the private petroleum industry, power plants, railways, ports, and telephone system, over which foreign capital had a large measure of control. But while agreeing that a Radical candidate should head the ticket, the Socialists and Progressive Democrats were unable to get together on a Vice Presidential candidate.

The Military Coup. With the Presidential election only three months away and the opposition parties unable to agree on their candidates, victory for the Concordancia and the continuance of Castillo's foreign and domestic policies seemed assured. At this juncture, four days before the scheduled reconvening of Congress, high army and navy officers executed a military coup on the night of June 3-4 that ousted the Castillo regime. Led by Gen. Pedro P. Ramírez, Castillo's former War Minister, Gen. Arturo Rawson, and Rear Adm. Saba H. Sueyro, the military leaders presented a demand for the President's resignation. He refused and attempted to organize resistance, meanwhile taking refuge on the minesweeper *Drummond* in the Plata River. With the exception of cadets of the Naval Mechanical School in the city's suburbs, who put up a brief fight, the armed forces and the police made no move to save the regime. Anti-Castillo throngs of civilians greeted the coup with joyous *vivas* for democracy and liberty. On June 5 Castillo returned to Buenos Aires and resigned. The rebel junta assumed full powers, naming General Rawson as Provisional President. Earlier Rawson had proclaimed martial law throughout the entire nation.

The circumstances of the revolt and the first statements of the revolutionary leaders aroused widespread expectation in Argentina and abroad that the Castillo policies would be abandoned in

favor of active collaboration with the other American republics and the restoration of democratic methods of government at home. The powerful Radical party announced its support of the revolutionary government. However the domestic and foreign policies pursued by the military dictatorship soon disabused these hopes.

The first shock came with the announcement of the membership of the Rawson Government on June 5. Strongly Rightist military men filled all except two posts in the Cabinet. The two civilian members were extreme reactionaries. Rawson and his associates gave assurances that the Constitution and the rights and freedom of the people would be respected. But on June 6 the dissolution of Congress was decreed—with the promise to form a new Congress at an opportune time—and rigorous suppression of Communist propaganda was ordered.

Ramírez Takes Over. Rawson and the members of his Cabinet were to have been formally inducted into office at noon on June 7. But early that morning he resigned and turned over the Presidential powers to General Ramírez. It developed that Rawson had been forced out by military associates hostile to his policy of breaking relations with the Axis. However the new Cabinet, sworn in with Ramírez that evening, appeared less illiberal and more favorably disposed toward the United Nations. Ramírez immediately issued a statement affirming Argentina's "friendship and loyal cooperation with the other nations of America in conformity with existing pacts." However he added that Argentine policy toward the rest of the world was "for the present, one of neutrality" and that the regime would "tolerate no foreign interference" with regard to its standards of government. Soon afterward the Government sought to remove Rawson from the scene at Buenos Aires by appointing him Ambassador to Brazil.

On June 8 the Ramírez Government ended martial law but continued the state of siege previously in force. The impending Presidential election was called off. A statement that Argentina would "show by acts . . . that she has drawn closer to her sister republics" was followed by a decree prohibiting the use of secret codes in international wireless communications. This was taken as a direct blow to Axis espionage agents in Argentina, and facilitated the prompt recognition of the new government by the United States and the other United Nations.

Despite these preliminary gestures toward the democracies, the Ramírez Government clung to the Castillo neutrality policies while growing steadily more arbitrary and reactionary in internal matters. Ramírez on June 15 stated that his regime would "hand the country back to its politicians" when it had "cleaned and restored" the nation. Repeatedly thereafter he emphasized that he had no designs against Argentina's democratic Constitution and institutions. Meanwhile the actual measures of his Government assumed an increasingly totalitarian aspect.

The political parties, the newspapers, and the radio were gagged. No public or private meetings "having political aims affecting either domestic or foreign policy" were permitted. Interventors were appointed to replace various provincial governments. Scores of persons suspected of Communist tendencies were arrested and interned in the desolate Neuquen Province of southern Argentina. Any criticism of the regime was forbidden and severely punished. Numerous labor unions were dissolved, along with the Nazi Federation of Ger-

man Welfare and Cultural Clubs. On the ground that they were tinged with communism, a number of Argentine pro-Allied organizations, including Acción Argentina, were disbanded. Meanwhile pro-Fascist, anti-democratic, and anti-Semitic newspapers and organizations were permitted to carry on their activities.

Some early actions of the dictatorship won widespread popular support. The former Ministers of Interior and Agriculture were among numerous members of the Castillo regime arrested on charges of corruption or malfeasance in office. Sweeping economic decrees curbed monopolies, checked soaring prices and rising rents, and raised the salaries of laborers and Government employees. A number of foreign-owned public utilities were expropriated while others were arbitrarily forced to reduce their rates.

Friction with United States. Soon after the U.S. Government recognized the Ramírez regime on June 11, the dictatorship proposed the sending of a special mission to Washington for a discussion of political, economic, and military questions. The apparent intention was to obtain U.S. military equipment for the Argentine Army under lend-lease in return for the subsequent severance of Argentine diplomatic relations with the Axis Powers. However the State Department made it plain that Argentina could not expect lend-lease assistance until after it had carried out the anti-Axis measures recommended by the Rio Conference.

A diplomatic impasse resulted when the Ramírez Government declined to go beyond the half-hearted gesture taken in curbing Axis diplomatic communications in code. In a July 4 speech before the American Society of the River Plate the Foreign Minister, Vice Adm. Segundo E. Storni, reiterated Argentina's intention to stand by her commitments and "duties of Pan American cooperation." But Washington, insisting on deeds rather than words, did not invite Argentina to the United Nations Conference on Food and Agriculture in July.

On July 31 the Ramírez Government issued unofficially a statement asking United States opinion not to pass "snap judgment" on Argentine policy as that might do irreparable harm to Argentine-American relations. This statement was followed by a decree of August 3 authorizing Argentine ships to violate the German submarine blockade and call at the port of New York. Under an order of July 7, 1942, Argentine shipping had been barred from all United States Atlantic ports.

Subsequent developments reflected a growing coolness in Argentine-American relations. The United States Ambassador went home to report early in August. The Office of Economic Warfare in Washington revoked certain licenses enabling United States exporters to send goods to Argentina. In reply to the warning delivered to neutral nations by the United States, British, and Canadian governments on July 30 against giving refuge to Italian Fascist or German Nazi leaders, the Argentine Government replied September 1 that it would "exercise the faculties that belong to it to decide in each particular case." On September 6 it was announced that the United States and British Governments had protested the arrest in Argentina of British and American officials of the Argentine subsidiary of the American and Foreign Power Co.

Storni-Hull Notes. At this juncture the U.S. State Department on September 8 released a letter addressed to Secretary Hull by Foreign Minister Storni on August 5 and Hull's reply of August 30.

The Storni letter denied that either the members of the Ramírez Government or the armed forces were animated by totalitarian ideology or sympathy. It declared that, on the contrary, they "base their acts on the firmest democratic convictions." It went on to defend Argentine neutrality as "only theoretical" and as benevolent toward the Allied nations.

Admiral Storni declared that although Argentine sentiment was firmly on the side of the United Nations, the Government could not fulfill its obligation to sever relations with the Axis because (1) the country was "not ready for it," (2) it would violate Argentine chivalry to act "when defeat is inexorably drawing closer to the countries of the Axis," and (3) to act "without a cause to justify it . . . would afford grounds to believe action is being taken under the pressure or threat of foreign agents, and this would not be tolerated by either the people or the armed forces of the country." The letter suggested that to pave the way for a possible future departure from neutrality President Roosevelt "should make a gesture of genuine friendship toward our people" through "the urgent provision of airplanes, spare parts, armaments, and machinery to restore Argentina to the position of equilibrium to which it is entitled with respect to other South American countries."

Secretary Hull replied that "the undoubted sentiments of the Argentine people have not been implemented by action called for by the commitments freely entered into by their Government in common with the Governments of the other twenty American republics." Argentina, he pointed out, had failed to sever diplomatic, financial, and commercial relations with the Axis powers. It had "authorized financial transactions of direct benefit to the enemies of the United Nations." It was permitted Axis agents to engage in "systematic espionage which has cost the United Nations ships and lives." It had intervened to assist Axis-subsidized publications in obtaining supplies of newsprint at favorable prices.

Finally, Hull charged, Argentina was the only American republic permitting radiotelephone and radiotelegraph communications with Japan, Germany, and Italy. Since United States policy was guided exclusively by considerations of hemisphere security and the Argentine Government had shown no disposition to join in hemisphere defense measures, Hull's letter said it would be impossible for President Roosevelt to furnish Argentina with arms and munitions under the Lend-Lease Act. The letter added that by failing to comply with its inter-American commitments, the Argentine Government was depriving that country of participation in the solution of postwar problems.

The Cabinet Crisis. Publication of the Storni-Hull letters in Argentina shook the Ramírez Government to its foundations. It inaugurated a bitter struggle between the moderate and extremist nationalist elements within the Cabinet. Admiral Storni resigned September 9 and his two chief aides in the Foreign Office were ousted the next day. Gen. Alberto Gilbert, the anti-United States Interior Minister, assumed the Foreign portfolio temporarily.

The position of President Ramírez, whom Storni had quoted as approving his letter, was likewise threatened. On September 11 several hundred army and navy officers, affiliated with a pro-Axis military organization headed by Col. Juan Domingo Perón, interrupted a Cabinet meeting to demand an explanation. Ramírez assured them that his good faith had been taken advantage of. The same

day a proclamation attributed to anti-democratic army officers was circulated. It repudiated the Storni letter as "full of falsehoods" and "an affront to fellow Argentines and comrades in arms." It threatened "Argentines who think and act on behalf of foreign interests" with "violent ejection from the revolutionary crusade."

Pressure from the Perón group of officers was generally considered a major factor in the triumph of extremist elements within the Government when the Cabinet crisis came to a head in October. On October 7 Dr. Felipe A. Espil, pro-democratic Argentine Ambassador to Washington since 1931, was replaced by Dr. Adrian C. Escobar, ardent Falangist and close friend of the Spanish Nationalist dictator, Gen. Francisco Franco. War Minister Gen. Edelmiro Farrell, a member of the Perón organization, was appointed Vice President by Ramírez on October 11. (Vice President Sueyro had died in mid-July.)

Two days later the three Cabinet members favoring an immediate break with the Axis resigned. Finance Minister Jorge Santamarina was replaced by Cesare Ameghino, reputed pro-Nazi; Public Works Minister Adm. Ismael Calíndez by Naval Capt. Ricardo Vago, a pro-Allied officer; and Justice and Education Minister Gen. Elvio Anaya by Gustavo Martínez Zuviria, a strongly pro-Nazi enemy of the United States who had written violently anti-Semitic books under the pen name Hugo Wast. The Cabinet changes were accompanied by heavy troop movements in Buenos Aires and the reshuffling of army commanders to eliminate those having political views at variance with the Government. On October 21 General Gilbert was named permanent Foreign Minister and another strongly anti-democratic military man, Gen. Luis C. Perlinger, succeeded him as Minister of Interior.

Trend Toward Absolutism. From this time on the Government displayed an increasingly reactionary and repressive attitude. The suspension of several Jewish newspapers brought an emphatic protest from President Roosevelt on October 15. The ban was immediately rescinded.

Four leading Argentine newspapers on October 15 published a strongly worded declaration, signed by 150 leading Argentines from all parties except the Nationalists, demanding "effective democracy" and "loyal fulfillment of international obligations." The next day President Ramírez decreed the dismissal of all public officials who had signed the manifesto. This action had wide repercussions. The ousting of many distinguished university professors set off violent student strikes and riots. More than 40,000 students were reported to have boycotted their institutions, which had been placed under Government intervenors. Numerous other government officials resigned.

The Government repressed all opposition with an iron hand. The inter-university student federation was outlawed along with an increasing number of other pro-democratic organizations. Charters of Jewish and Masonic welfare and mutual aid associations were withdrawn in some provinces. All criticism of Government policies was declared illegal and punished by imprisonment in desolate Patagonian concentration camps. The pro-democratic press, which had seized every occasion to urge fulfillment of the Government's initial pledges, was placed under increasingly stringent censorship. All wire and radio communications facilities were put under the War Ministry's control on November 6. On November 9 a Ministry of Press and Information, headed by

Col. Enrique Gonzales, was established to control all sources of public information.

Perón Bosses Labor. The Government encountered its chief difficulty in attempting to control labor. A ban on strikes issued soon after the coup d'état of June 4 proved ineffective. Late in October Colonel Perón was appointed chief of the National Labor Department to curb rising labor unrest. When he sought to forestall further walkouts by sending numerous labor leaders to the Neuquen concentration camp, the workers in two La Plata packing plants struck and forced a suspension of operations. However the suppression of all news of these events prevented the spread of the labor disturbances. On November 30 Perón was appointed head of a new Secretariat of Labor and Social Security, charged with controlling labor-capital relations. He retained his post as Secretary General of the War Ministry and also as secretary general of the anti-democratic Army-Navy officers organization, known as the GOU.

Anti-Communist Drive. In suppressing all opposition elements, the Ramírez Government placed particular emphasis upon rooting out communism, both real and imagined. Communist organizations were raided and suppressed. All books and periodicals with anything resembling Communist propaganda were "purged" from schools, libraries, and publishing houses. The campaign against communism was employed to suppress many non-Communist organizations and publications disapproved by the Government. On December 2 Minister of Education Martínez Zuviria ordered the dismissal of professors and teachers "appearing to hold ideas contrary to public order." Any student taking part in "subversive propaganda or actions" was to be barred from all universities and schools and made liable to "sanctions of another nature."

Political Parties Banned. The culmination of this reactionary trend was reached on December 31 when decrees dissolved all political parties, banned all political activities, and made the teaching of the Roman Catholic religion compulsory in all primary and secondary schools. Meanwhile some hundreds of political refugees had fled Argentina to Uruguay, Brazil, and Chile to escape arrest. Numerous illegal anti-Government publications made their appearance; some were printed in neighboring countries and smuggled across the Argentine border.

Late in December a new Federal police force was created to assist the dictatorship in crushing the opposition. Minister of Public Works Vago, said to be the only pro-democratic figure in the Government, resigned December 23. By the year's end the military dictatorship appeared well on the way toward the establishment of a Fascist regime modeled on that of Franco Spain.

Other Foreign Relations. On Jan. 1, 1943, the Argentine Foreign Office angrily criticized a statement issued by the British Foreign Ministry the previous day deploring Argentina's continuance of diplomatic relations with the Axis Powers. Nevertheless Britain early in April renewed its annual contract to buy Argentine meat surpluses at slightly higher prices. The contract called for the delivery of 720,000 tons of beef, mutton, and pork at the rate of 50,000 tons monthly. Even more important contracts for Argentine meat and eggs were signed by Great Britain in September. Denying that this action had political significance, the British Foreign Office on September 27 again criticized Argentina's failure to line up with the other American republics.

Price gouging by Argentine exporters led the Union of South Africa in August to impose an embargo on all Argentine goods. On July 28 the Argentine Government took over three French merchant ships that had been lying in port at Buenos Aires since the fall of France; this increased the Argentine state mercantile marine to 31 ships of 219,000 tons.

On January 11 the Foreign Office demanded that Germany recall its naval and air attaché in Buenos Aires, Capt. Dietrich Niebuhr, after the latter refused to waive his diplomatic immunity and appear before the Supreme Court to answer charges of espionage made by the Chamber of Deputy's special committee investigating anti-Argentine activities. Niebuhr sailed on a Spanish ship January 30.

Argentine-Chilean relations remained cordial despite Chile's decision to break with the Axis. In mid-April Argentina signed a 10-year contract to purchase large quantities of natural nitrates and iodine from Chile. Late in August the two countries signed agreements for the exchange of non-competing goods without customs duties and for the early completion of the Antofagasta-Salta railway and other projected Argentine-Chilean highway routes.

The Argentine Government continued its efforts to develop closer political and economic relations with Bolivia and Paraguay in answer to Brazil's growing contacts with those republics. Without waiting for the other American republics to act, the Ramírez Government on December 30 decided to recognize the newly established revolutionary government of Bolivia, with which it was believed to have close ideological ties. In November Argentina signed a commercial treaty giving important concessions to Paraguay. During a state visit made to Buenos Aires by the Paraguayan President December 11-16 Paraguay obtained a free port in the Argentine capital and other substantial economic favors, described in the article on PARAGUAY under *History*.

See BOLIVIA, BRAZIL, CHILE, and ECUADOR under *History*; BANKS AND BANKING; CHEMISTRY under *Foreign*; DAMS; FRENCH LITERATURE; JUVENILE DELINQUENCY; LABOR CONDITIONS; MUSIC; NEWSPAPERS; RAPID TRANSIT; SOCIALISM; SPANISH-AMERICAN LITERATURES; TUNNELS. Also see PAN AMERICANISM.

RONALD STUART KAIN.

ARIZONA. A mountain State. Area: 113,909 sq. mi. Population: 499,261 (1940 census); 573,881 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Sidney P. Osborn (Dem.), inaugurated in January, 1943, for his second two-year term; Secretary of State, Dan E. Carvey; Attorney General, Joseph W. Conway.

See COPPER.

ARKANSAS. A west south central State. Area: 53,102 sq. mi. Population: 1,949,387 (1940 census); 1,809,012 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles: **AGRICULTURE**; **MINERAL PRODUCTION**; **ROADS AND STREETS**; **SCHOOLS**; **SOCIAL SECURITY BOARD**; **TAXATION**; **UNIVERSITIES**; and **VITAL STATISTICS**. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article **ELECTIONS IN THE UNITED STATES**; also, for incumbents, **HOUSE OF REPRESENTATIVES** and **SENATE**.

Legislation. See the separate article on **STATE LEGISLATION**.

Officers. The Governor is Homer M. Adkins (Dem.), inaugurated in January, 1943, for his second two-year term; Lieutenant Governor, J. L. Shaver; Secretary of State, C. G. Hall; Attorney General, Guy E. Williams. See **FLOODS**.

ARMAMENTS. See topics listed under **MUNITIONS**.

ARMED FORCES, U.S. For the constitution and military activities of the armed forces, see primarily **AERONAUTICS**; **MILITARY PROGRESS**; **NAVAL PROGRESS**; **UNITED STATES under Armed Forces**; **WORLD WAR**. For medical work see **DENTISTRY**; **INSECT PESTS**; **MEDICINE**; **PSYCHIATRY**; **PSYCHOLOGY**; **PUBLIC HEALTH SERVICE**. For recreational and various welfare activities in behalf of service men, see **AMERICAN LEGION**; **FEDERAL SECURITY AGENCY**; **RED CROSS**; **SOCIETIES**; **UNITED SERVICE ORGANIZATIONS**; articles on churches; also, **MAGAZINES**. For legislation affecting individuals (benefits, voting rights, family allowances, etc.) see **SELECTIVE SERVICE SYSTEM**; **STATE LEGISLATION under War and Postwar**; **TAXATION**; also, for court-martial, **LAW** and **PRISONS**. For admission of **special groups**, see **IMMIGRATION** (non-citizens); **NEGROES**; **PRISONS** (prisoners); **WAR RELOCATION AUTHORITY** (Japanese). For activities and postwar plans with regard to **demobilization and rehabilitation**, see **AMERICAN LEGION**; **EDUCATION**; **POSTWAR PLANNING**; **PSYCHOLOGY under Rehabilitation of the War Injured**; **SELECTIVE SERVICE SYSTEM**; **SOCIAL SECURITY BOARD**; **VETERANS' ADMINISTRATION**; **VOCATIONAL REHABILITATION**, **OFFICE OF**.

ARMENIAN SOVIET SOCIALIST REPUBLIC. See **UNION OF SOVIET SOCIALIST REPUBLICS under Area**.

ARMISTICE. See **ITALY under History**.

ARMORED DIVISION. See **MILITARY PROGRESS**.

ARMY, U.S. The principal discussion of the U.S. Army is under **MILITARY PROGRESS**, **SELECTIVE SERVICE SYSTEM**, and **WORLD WAR**. For **Army Air Force**, see **AERONAUTICS**. For **Army Signal Corps**, see **COMMUNICATIONS**.

ARMY MOTION PICTURE SERVICE, ARMY PICTORIAL SERVICE. See **PHOTOGRAPHY**.

ARMY SPECIALIZED TRAINING PROGRAM (ASTP). See **EDUCATION**; **LIBRARY PROGRESS**; **UNIVERSITIES**.

ART. Despite the war, heavy taxation, and greatly increased cost of living, the year 1943 in art was far from dull. Perhaps as never before in this country, art has been recognized as an important factor in the better living for which democracy aims, and effort has been made on many sides to correlate it with life and so avoid the threatened blackout of

culture. Also, artists have been called upon for definite services which heightened self respect and gave assurance of confidence—in other words of being needed. The experimental type of art, for the time being, gave place to the traditional—there was something to be said which must be said clearly. The art museums redoubled their effort to take art to the people and especially to reach men in the armed service, as well as workers in essential industries. The market for works of art by the great masters was exceptionally good, although that for the works of contemporary paintings and prints dropped sharply. The sculptors especially suffered, as their chief medium, bronze, became unobtainable. There were fewer large benefactions in the field of art than usual and almost no building was done, but the art museums continued to make notable acquisitions through income on endowments for such purpose. From a broad view the prospect was found to be far from discouraging.

Art Museums. One of the outstanding events of the year was the merger of the Whitney Museum of American Art, of New York, with the Metropolitan Museum of the same city. This took place in March. The last exhibition held in the Eighth Street building by the Whitney Museum before the merger was of sculpture by Gertrude Vanderbilt Whitney, founder and patron, which took the form of a memorial. For twelve years, under Mrs. Whitney's guidance and patronage, the museum had functioned in many ways to advance interest in the work of young American artists. Encouragement was given through prizes and purchases and by facilities for exhibition and sale. A large and representative collection was at the same time built up for the Museum. According to the terms of the merger, a "Whitney Wing" is to be added to the Metropolitan Museum of Art after the war, in which works from the Whitney Museum collection and others belonging to the Metropolitan Museum will be shown. The educational program instituted by the Whitney Museum will be carried on as heretofore and extended. Mrs. Juliana Force, formerly Director of the Whitney Museum, was, when the merger became effective, made Advisory Director. Owing to lack of space in the Metropolitan Museum prior to the building of the new wing, the Whitney Museum's annual exhibition which opened in November, was held in the old building at 10 West 8th Street. No prizes were given but \$20,000 was spent for purchases, each Museum contributing one half.

In February, announcement was made of the transfer of the Albert E. Gallatin Collection of Modern Art from New York University to the Philadelphia Museum, where it will be displayed as a unit and remain on loan during Mr. Gallatin's life, after which it is to become the property of the Museum. This collection had for fifteen or sixteen years occupied alcoves in a study hall in the University's Washington Square building and been known as the "Museum of Living Art." The reason for the transfer was the University's need of the space occupied.

In April the Chester Dale collection of Twentieth Century French Paintings was put on exhibition in the Chicago Art Institute, as an indefinite loan. This collection, which is world famous, comprises about fifty examples of the work of French modernists—Picasso, Braque, Matisse, Utrillo, and others—which were for the most part acquired by Mr. and Mrs. Dale from the artists. Later in the year Mr. and Mrs. Dale lent a fine group of paintings of the same school to the Philadelphia Museum.

The Jules S. Bache Collection of old master

paintings and *objets d'art* was removed from the Bache residence on Fifth Avenue and lent, for the summer, to the Metropolitan Museum of Art. One of the galleries in which it was shown was remodeled by Mr. Bache, with the cooperation of the Museum, as an 18th Century dining room in the style of Louis XVI, similar to such a room in his house. The Bache Collection covers the art of four centuries and is of superlative quality. The loan to the Metropolitan Museum was made in order that a larger public might profit by it than the Bache residence could accommodate.

In March announcement was made of the gift to the National Gallery of Art of the Lessing J. Rosenwald collection of prints, drawings, manuscripts, and rare books—the prints and drawings designated to the Gallery, the manuscripts and books to the Library of Congress for its Rare Book room. Some idea can be had of the importance and munificence of this gift because among its 8,500 items are unique woodcuts and rare engravings of the 15th Century including 67 of the former and 91 of the latter by Albrecht Dürer; all of Van Dyck's portrait etchings, many in rare states; 230 etchings by Rembrandt, and 367 by Whistler, who is also represented by many drawings. Just before Christmas eighty prints and drawings selected as indicative of the character and scope of this great collection were exhibited in the National Gallery of Art and a handsome illustrated and annotated catalogue published.

In August the National Gallery of Art announced the gift of the Richter "Archive of Illustrations on Art," consisting of over 64,000 photographs and illustrative cuttings, assembled over a long period of years by Dr. George Martin Richter, eminent authority on Italian art. The donor was Solomon R. Guggenheim, founder of the Museum of Non-Objective Art, New York. This Archive, which is expertly connotated, greatly increases the facilities for study of Italian art in this country.

In this connection mention should be made of the establishment by the Philadelphia Museum of "Archives of American Art," to consist of illustrations, reproductions, letters, and other documents having to do with the lives and works of American artists. These are to be preserved in the vault of the Museum's Print Department, available to students and writers at all times and made known to the public through recurring exhibitions. They will be developed under the supervision of a Council of experts headed by Carl Zigrosser, Curator of Prints of the Philadelphia Museum.

One of the outstanding events of the year, was the gift of the Grenville L. Winthrop collection to the Fogg Museum of Harvard University. This collection comprises over 4,000 items of diverse character, paintings, sculpture, water colors, drawings, porcelains, and furniture. It is especially rich in water colors and drawings of the 19th Century of which there are more than 400; among them are 52 by Blake and 42 by Ingres. Also included among the oil paintings are Peale's portrait of Washington, Duplessis' of Benjamin Franklin and David's of Napoleon. The collection was transferred to the Fogg Museum shortly after Mr. Winthrop's death (see *NECROLOGY*) but not exhibited until October, and then only in part.

The Cranbrook Academy of Arts, at Bloomfield Hills, Mich., founded and endowed by George G. Booth of Detroit, early in 1943 took possession of its new art building. Essentially modern in design, but simple and sincere, with beautiful setting, this building of functional brick and stone, 400 feet in length, two stories in height, provides exhibition

galleries, study halls, work rooms, and library. The architect was Eliel Saarinen, one of the leading exponents of modernism, and head of the Academy. Factors in the setting are works in sculpture by Carl Milles, renowned Swedish sculptor, now a citizen of the United States and head of the Cranbrook Academy's Department of Sculpture.

Gifts and Loans. Numerous gifts and loans were made to the National Gallery of Art during 1943; most notable among them was that of \$5,000,000 given by the Mellon Educational and Charitable Trust, formally accepted by Congress on April 3. The Trust also gave to the National Gallery of Art 63 portraits by early American painters, chiefly derived from the Thomas B. Clarke Collection, acquired *en bloc* by Mr. Mellon shortly before his death. Included in this gift were 19 paintings by Gilbert Stuart, which, added to the five previously presented by the Trust, collectively afford a survey of Stuart's manner and style not to be found in any other institution. Twenty-two of the portraits given were accepted under the condition that should a National Portrait Gallery be established by the Government within twenty years they would be turned over to it.

Other portraits by early American artists were given the National Gallery by private collectors: five by Mr. and Mrs. Chester Dale, one by Clarence Van Dyke Thiers. From Mr. and Mrs. Dale the Gallery received, later in the year, eleven important canvases by master painters previously loaned. These included works by masters not already represented in the National Collection.

From the J. H. Whitmore Company of Connecticut, the National Gallery of Art received two very important full-length figure paintings by Whistler, "The White Girl" and "L'Andalouse"—the one of his favorite model "Jo," the other of his sister-in-law, Ethel Birnie Phillips.

The City of New York in January, 1943, appropriated \$40,000 to cover the cost of preparing plans for alterations and improvements to the Metropolitan Museum of Art, included on the Mayor's program for Post-War Public Works. The Museum appropriated from its own funds a like sum and Robert B. O'Connor and Aymar Embury II, architects, were appointed to draw plans. The total cost of construction envisioned is given as \$4,000,000.

The Rhode Island School of Design received from ex-Senator Jesse H. Metcalf \$500,000 for further endowment, he having been a founder and valued Patron of the institution for years.

Building and Development. The Walker Art Center, Minneapolis, established in June an American art section through the purchase of fifteen paintings by contemporary artists, with funds derived from the T. B. Walker Foundation.

The Pasadena Art Institute, through the generosity of Grace Nicholson, acquired the building in the center of the city previously used by her as an art gallery and home. It provides headquarters for the Institute, five large and seven small galleries for exhibition purposes, as well as studios, class rooms, and assembly hall.

The Addison Gallery, Phillips Academy, Andover, Mass., put into effect in September a unique plan for the upbuilding of its permanent collection. An exhibition (to be thereafter an annual event) consisting of paintings, drawings, and sculpture desired for acquisition, was held, and members of the Gallery Association were invited to buy—but with the understanding that works so acquired, after loan to the purchaser for a fixed number of years, would become the property of the Gallery.

A work priced at \$100 or less could be kept for two years, those priced from \$200 to \$500 for three.

A somewhat different, but also novel, plan with similar object was inaugurated in Tucson, Ariz., under the auspices of the University of Arizona, and the generous enterprise of a private collector who gave up collecting postage stamps to collect paintings by contemporary American painters to be placed in public institutions. The goal was 100 paintings in five years, and cooperation on the part of the public was invited. All purchases are to be made under advice, and the cost will not be excessive—about \$250 for oils and \$50 for water colors. The first year's purchases were exhibited in the Whitney Division of the Metropolitan Museum of Art in April.

The Iranian Institute, New York, acquired as a permanent home property at 9 East 89 Street, formerly a private residence. This will house its School of Asiatic Studies and provide space for library, offices, study rooms, and five galleries, the largest of which will be devoted to Chinese and Indian Art, one to the art of Turkey and the Near East, and others to that of Irania.

The Brooklyn Museum opened in February a series of new galleries devoted to the display of the Colonial and Folk Art of South America. Two important period rooms were installed late in 1943—one, a stately English drawing room supposed to have been designed by William Kent, is in the Huntington Museum, San Marino, Calif., the other, a drawing room designed by Robert Adam, from Lansdowne House, London, was acquired in 1934 by the late George H. Lorimer and given in his memory to the Philadelphia Museum of Art by Graeme and Sarah Lorimer.

Discontinuance of Federal Activities. By order of President Roosevelt the Work Projects Administration and the Section of Fine Arts, Public Buildings Administration, were terminated on July 1 as no longer essential. In both instances skeleton organizations were retained to wind up outstanding affairs.

The art program of the WPA, directed by Holger Cahill, employed artists all over the country at a minimum wage, to paint and to draw, make prints, and produce sculpture, their works becoming the property of the Government and allocated to various public and semi-public institutions. To cultivate a knowledge and appreciation of art, 90 art centers were established where no art galleries were previously to be found; exhibitions were held and various allied projects sponsored. The "Index of American Design" came into being through these channels. Over ten million dollars were spent on this work between 1935 and the time of its discontinuance.

The Section of Fine Arts, PBA, which was created in October, 1934, was of a different nature. Its function was to secure from artists of ability decorations, chiefly mural paintings and sculpture, for Federal buildings—post offices, court houses, and the like. Anonymous competitions were set up and awards made by juries of outstanding professionals in the several fields. The cost was met from a one-per cent allocation from the amount appropriated for building. From October 16, 1934, to July 30, 1943, these expenditures reached \$1,870,988. This covered the cost of 1,092 mural paintings and 287 works in sculpture, placed in 1,208 Federal buildings—in almost as many cities throughout the United States. These were obtained through the channel of 191 competitions, in which 40,989 artists were competitors and 40,988 works entered.

No other country in the world has ever put into effect so gigantic a program as this of the WPA and the Section of Fine Arts, jointly, for the advancement of art. It is too early to correctly evaluate results; while no outstanding genius has as yet emerged there is no doubt that horizons have been greatly widened and new estimates of art set up.

Edward Bruce, who instigated this gigantic work and directed its development as Chief of the Public Works of Art Project, the Section of Painting and Sculpture, and the Section of Fine Arts, successively, died on January 27, 1943, in the Hollywood Hospital, Hollywood, Fla. A group of over one hundred artist friends contributed a painting each to be given to the hospital in which his life ended.

Art Education. Two epoch-marking reports on art education were published and given wide circulation here and abroad during 1943. The one issued in this country had chiefly to do with the adjustment of the college curriculum to wartime conditions and needs, obviously, however, looking to the future. It came from the United States Office of Education (q.v.) and was drawn up by a group of professors of art in American colleges and instructors in Art Museums, eleven in number, headed by Sumner McK. Crosby, president of the College Art Association and assistant professor of Art at Yale. The British report came from a special committee appointed by the Royal Society of Arts and was published in the Society's *Journal*. This gave first consideration to the service to be rendered by art in postwar days in the industrial field.

In Britain during 1943 a great educational program in the arts was conducted with outstanding success by a Council for the Encouragement of Music and the Arts, working in cooperation with the National Board of Education. Under this program the best music, drama, and exhibitions of fine arts were taken to the people not alone in the cities but in the rural districts throughout the land. Half of the cost of this program was donated by the Pilgrim Trust, founded and endowed by the late Edward Harkness of New York to promote closer friendship and better understanding between the British and American people. The other half was appropriated by the British Government, which never before had been willing to "interfere in the Fine Arts." It was the Pilgrim Trust that took the initiative and thus overcame objection. This "adventurous policy" will, it is thought, have a lasting effect on British life.

A somewhat similar effort has been made in this country but through separate agencies rather than coordination. An outstanding instance is that of the Sunday evening concerts, exhibitions, etc., arranged especially for service men and their guests by the National Gallery of Art. The Metropolitan Museum of Art has likewise given free concerts of the best orchestral music; and has lent paintings, sculpture, and art objects from its permanent collection to a large General Hospital for war wounded, situated on Staten Island. Similar instances might be noted throughout the country under like patronage.

Salvage and Restoration of Art in Europe. To protect and salvage works of art in the war zones definite steps were taken early in 1943. The American Council of Learned Societies, of which Waldo G. Leland is director, took the initiative by appointing in January a committee of leading authorities in the field of art, not only to call the attention of the Government to immediate need, but also to place at its disposal the services of those best qualified to serve as advisors. Headquarters were established in

the Metropolitan Museum, New York, and research work was promptly organized in the Frick Library, which generously offered cooperation. This committee was headed by William B. Dinsmoor, president of the Archeological Institute of America, and had as members Francis H. Taylor, director of the Metropolitan Museum of Art, David E. Finley, director of the National Gallery of Art, Charles R. Morey of the Art Department of Princeton University, Paul J. Sachs, Professor of Art at Harvard, Henry M. Lindenberg, historian, Charles Henry Chase of Harvard, author, and Archibald MacLeish, Librarian of Congress. To cover actual costs a grant was made by the Rockefeller Foundation, but much service was volunteered. In fact over a thousand experts within the year freely offered assistance. Of these, quite a number were refugees. The information sought concerned the location of works of art and historical monuments which should be protected and restored as far as humanly possible.

In August a second committee was appointed by the President through the Department of State, not to supersede the earlier one but to give governmental sanction and authority. Organization of this official committee (first suggested by Chief Justice Stone) was effected at a meeting held in the National Gallery of Art at Washington, D.C., on August 25. The chairman is Associate Justice Owen D. Roberts. David E. Finley is vice chairman, Huntington-Cairns, also of the National Gallery, secretary; while serving as members are William B. Dinsmoor, Francis H. Taylor, Paul J. Sachs, Archibald MacLeish, and Herbert H. Lehman.

Through these coordinating committees considerable work was done with exceeding promptness. Maps were drawn on which monuments to be spared in bombing raids, if possible without interference with military requirements, were indicated. These, placed in the hands of the government, were transmitted to those in command in the field, duplicated, and placed in the hands of bombers, with suitable instructions. Also instruction was given along these lines, and in the history of art in the schools for officers training with a view to post-war service. Young men called from Art Museum positions to the armed service were selected to receive this instruction and qualify for such duty. One of the most important of such teaching centers was at the University of Virginia, Charlottesville, during the summer of 1943.

The United States is to cooperate in this work with similar committees appointed by our Allies and those of the subject countries. Great Britain has already taken steps in this direction. Men from the British Museum, Ministry of Works, National Gallery, and Royal Institute of British Architects have been assigned and in some instances already sent to occupied territory.

Artists in the War. In March, 1943, the War Department selected forty-two American artists to paint, under the supervision of the Army, war as witnessed on the several fronts. By the end of April eight of these had gone to the Southwest Pacific theater of combat and one to Alaska, while fourteen in uniform awaited assignment and twenty were working as civilian employees. In July, however, Congress declined to appropriate the \$125,000 estimated cost of salaries and travel of these men, and there was nothing to do but cancel the appointments and order the artists home on a month's notice. On the publication of these facts, the magazine *Life*, which had already sent artists to the front, took over several of these men, and thus enabled them to continue the work for which they had vol-

unteered. Others stayed on voluntarily. *Colliers* signed up for several.

In this connection mention should be made of the series of oil paintings made by Lt. Com. Anton Otto Fischer, U.S. Coast Guard, of the cruise of the Coast Guard cutter *Campbell*, on convoy duty and sunk by enemy action. These are not only illustrative but vividly impressive as works of art. They were made under commission of *Life* and given by its publishers to the U.S. Coast Guard, by whom they were exhibited in Washington and elsewhere.

Two very notable series of water colors, one of "American Industries Geared for War" and the other of "Traffic and Transportation" were made by Thornton Oakley, illustrator and mural painter, for the National Geographic Magazine in which they were reproduced in full color, later to be sent on a nationwide exhibition circuit.

At the National Gallery toward the last of the year were shown 101 drawings and paintings by seven American artists picturing Naval Aviation from preflight to combat—and admirably. About the same time a collection of paintings and drawings by Merchant Seamen of the United Nations was put on view in the Corcoran Gallery of Art. Both of these exhibitions were sponsored by the Government and Government owned. They, also, were to be sent out on circuits.

Exhibitions. Professional organizations held their annual exhibitions as usual but under severe restrictions. Prizes were awarded in accordance with custom, but there were fewer sales and less enthusiasm, as well as obvious gaps among contributors. In the large cities several engaging exhibitions were held to raise funds for war relief; others for the benefit of home charities. Among the most notable of these were exhibitions of paintings by Forain in New York and of paintings by Renoir in Los Angeles.

During the early part of the year the Cleveland Art Museum exhibited as a unit in its galleries the important collection of paintings and other works of art bequeathed to it some years ago by John L. Severance. This collection in many respects parallels that given by Mr. Widener to the National Gallery of Art. Later in the year the 250 units of which it is composed were distributed among the galleries according to era and school.

In December the Metropolitan Museum placed on exhibition the collection of Medieval and Renaissance Art—200 items—assembled and bequeathed to it by its late president, George Blumenthal.

A delightful collection of French 18th and 19th Century drawings and water colors from the Louvre, other French museums, and private collections was shown in the National Gallery of Art in March and again, by urgent request, in August. These are part of a larger collection of French paintings, derived from the same source, held for the duration and continuously on view.

Two very noteworthy exhibitions were held in the Worcester Art Museum: one of "New England Ancestral Portraits," in cooperation with the American Antiquarian Society, consisting of 55 works all of the 18th Century and painted in New England; the other of "Contemporary New England Crafts," likewise calculated to engender local pride.

The Metropolitan Museum of Art, New York, lent to the Milwaukee Art Institute in 1943, 150 of its permanent exhibits—paintings, tapestries, and ceramics for display for from three to five years.

Astounding reports of exhibitions in England and France reached this country in early autumn. From England the news was that 405 works shown

during the summer in the Royal Academy's annual exhibition, Burlington House, London, were sold, for the equivalent of \$56,105. The report from Paris was to the effect that all the art organizations had, during 1943, held their annual exhibitions as usual, and that in the "Salon des Independantes" 3,300 works were shown, while the "Salon d'Hiver" catalogued no less than 2,000. Among other exhibiting bodies chronicled as carrying on were the "Artistes, Français" and the "Nationale des Beaux Arts."

In an exhibition, held in the fall in the National Archives, Washington, of materials from the Franklin Delano Roosevelt Library, was shown a painting of Marrakech, Morocco, by Prime Minister, Winston Churchill, done in 1929 and given by him to President Roosevelt in January, 1943, at the time of the Casablanca Conference in North Africa; an excellent and charming work in oils, well up to the best professional standard.

Painting. Painting in the United States in 1943 was at a low ebb—quantitative rather than qualitative. This may have come from a lowering of standard or from excessive exhilaration under government patronage. Also it may have been affected by the unrest of war time. There were many pictures painted both in oils and in water color but very few that were outstanding. Those organizing the big exhibitions found it difficult to obtain outstanding examples; the dealers complained that there were not enough of fine quality to supply the demand of private buyers. Of course there were exceptions. Some of the best paintings shown were of the war or in the interest of victory. To a large extent, in the rendition of other subjects, the "Main Street" element and the influence of the French modernists were dominant. In this field art seemed to have lost its traditional elegance and beauty.

Especially indicative of current trends in painting were the exhibitions held in the late autumn by the Carnegie Institute, Pittsburgh, the Chicago Art Institute, and the Philadelphia Water Color Club, all of which were made up of works invited. The Carnegie Institute's exhibition was entitled "Painting in the United States" and included 304 oil paintings chosen by John O'Connor, acting director. Of the \$3,200 distributed in prizes, the first and largest (\$1,000) went to Wayman Adams for a portrait of the well-known cellist, Gregor Piatigorsky, playing. The jury of award consisted of three museum men: the directors of the Metropolitan Museum, Francis H. Taylor, and of the Toledo Museum, Blake-More Godwin, and the secretary of the Detroit Museum, Clyde H. Burroughs.

There were only 198 paintings and 29 pieces of sculpture in the Chicago Art Institute's 54th Annual; \$2,700 were distributed in prizes by a jury composed of the director of the Addison Gallery, Bartlett H. Hayes, Jr., a painter, Charles Sheeler, and a sculptor, Henry Kreis.

In the Philadelphia Water Color Club's 41st Annual Exhibition in the Pennsylvania Academy, there were 340 water colors and prints. Awards were made by a mixed jury of professionals and lay members. To Phil Paradise went the Philadelphia Water Color Club prize, to Millard Sheets the Dana Water Color medal, to Clare Leighton the Eyre medal, and to Stow Wengert the Pennell Memorial medal, the last two for prints. All three of these exhibitions were widely representative.

On January 5 a series of four mural paintings by Barry Faulkner was dedicated in the Senate chamber of the New Hampshire State House at Concord. The subjects were all related to the his-

tory of the State. One in particular pictured the late Abbott H. Thayer, artist, of Dublin, N.H. pursuing his study of protective coloration which laid the foundation of camouflage.

Three pictorial panels representing the "Reconstruction and Well-being of the Family" by Philip Guston were completed early in the year and placed in the Social Security Building at Washington. On January 6 a mural of Marian Anderson singing to a vast audience from the steps of the Lincoln Memorial in Washington, was ceremoniously unveiled in the Department of the Interior. The artist was Mitchell Jamieson, of Washington. The cost of the mural was met through private subscription.

A large mural entitled "The Four Freedoms" was painted by Hugo Ballin for the new Burbank City Hall, California, primarily, he said, to bring the Atlantic Charter and its meaning home to the people. The composition is very elaborate and in very different vein from the illustrations of the "Four Freedoms" executed by Norman Rockwell and, after publication in the *Saturday Evening Post*, widely circulated.

A sharp controversy arose over the whitewashing of a large mural painting, seventy feet long, placed in a public high school in Columbus, Ohio, in 1938, by the PWA, which had not, it seems, been approved by the principal or members of his board. The artist offered to remove the white-wash and make necessary restorations free of charge, but his offer was declined. Similar incidents were reported from other locations.

Commissions for seven mural paintings depicting the Negroes' contribution to life in America were commissioned in April for the lobby and library of the Recorder of Deeds' new building in Washington, by the Section of Fine Arts of the Treasury Department. These commissions went to seven different artists. The position of Recorder of Deeds in Washington has customarily been held by a Negro. A mural based on the Negroes' contribution to "Democracy for America," the work of Charles W. White, was dedicated at Hampton Institute during 1943. The work was done under a Rosenwald grant. The painter is a 25-year-old Negro born in Chicago.

A second annual exhibition of the works of Negro artists, at which \$500 were distributed in prizes, was held in Atlanta, Ga. "Young Negro Art," an exhibition of the work of students at Hampton Institute, was held in the Young People's Gallery of the Museum of Modern Art, N.Y., in October. In Washington, the same month, there was established a dealer's gallery for the display and sale of works by Negro artists and others, under the charge of the former curator of the Howard University Art Gallery.

Latin American Art. To meet the demand of teachers and students for information concerning the art of South and Central American countries the Pan American Union in 1943 prepared an envelope containing thirty-eight photographs, 6 × 9 inches in dimensions, of the works of outstanding Latin American artists. Accompanied by an essay on Latin American painting by Dr. Robert C. Smith of the Library of Congress, it could be circulated at small cost and proved popular. It is Dr. Smith's opinion that the Latin American countries, more than our own, have evolved a distinctive national art.

Exhibitions of paintings by Latin American artists have continued, but on a less extensive basis than during 1942, the war making travel and transportation most difficult. As an international courtesy a number of these have been shown in the

U.S. National Museum at Washington and the Pan American Union.

The first of the year the Secretary of State notified those concerned that the increasing exigent demands of the war upon the manpower supply in the United States made it necessary for our government to suspend for the duration the award of official scholarships, fellowships, and travel or maintenance grants to students from the United States. The Secretary also declared the intention of resumption thereafter when conditions would permit. No grants previously made were withdrawn, and visiting students have been made welcome.

Prints. Mention has already been made of the magnificent gift of the Rosenwald collection to the National Gallery of Art, which institution likewise had the good fortune to receive complete sets of Whistler's Venice etchings, the first comprising 12 done in 1880 and the second 26 done five years later, both very rare. These were the gift of Mrs. J. Watson Webb, in memory of her mother, Mrs. H. O. Havemeyer. The Library of Congress, Division of Fine Arts, acquired through gift and purchase, and the generous cooperation of the artist's family, an almost complete collection of the etchings of the late J. Alden Weir, comprising 80 to 90 prints. Through the gift of Albert W. Wiggins the Public Library, Boston, acquired in 1943 a complete set of etchings by Frank W. Benson, many in rare states.

Financed by income from the Pennell Fund for the advancement of the graphic arts, a national competition was set up, and an exhibition held, under the auspices of the Division of Fine Arts of the Library of Congress, in the late spring and early summer of 1943. Both competition and exhibition were limited to prints made within 12 months of the date of submission. Over one thousand prints were submitted from printmakers in all parts of the country, of which 467 by 386 artists were selected for display. Thirty-five received awards, which took the form of purchases for the national collection at prices a little higher than the market called for. The jury consisted of John Taylor Arms, etcher, Stow Wengenroth, lithographer, and Dr. Holland. From the prints shown, 85 were selected by the American Federation of Arts for showing throughout the country.

Leicester B. Holland, for nearly fifteen years Chief of the Division of Fine Arts of the Library of Congress, resigned October 1, nominally to resume teaching. During his term of office the Library's print collection was almost doubled and its uses greatly increased. Also through his initiative the "Cabinet of American Illustration" was established and the "Pictorial Archives of Early American Architecture" set up.

The Metropolitan Museum of Art received from the PWA in the autumn a collection of 1,700 prints made by American printmakers under government patronage. These, selected from many more offered, greatly augment the Museum's collection.

Sculpture. Sculptors have been much handicapped during the war by restrictions in the use of metals. For this reason many have taken to cutting their works in marble or stone, or casting them in cement and other compositions. Many have sought and, because of technical proficiency, found occupation in war industries. Contracts given by the Government for sculpture are to hold good after the war, but with the conclusion of the Section of Fine Arts the prospect of new contracts through this source came to an end. The war has put a stop to private orders for monumental works.

On April 13, the two hundredth anniversary of the birth of Thomas Jefferson, the Jefferson Memorial in Washington was ceremoniously dedicated, and a 16-foot standing statue of Jefferson by Rudolph Evans of New York unveiled. Eventually this is to be cast in bronze but temporarily it was set up under the dome of the rotunda in plaster, painted. It is a composite portrait, made after much study of source material, and is thought to well represent the great statesman. On the pediment above the front portico of the Memorial is a bas relief by Adolph A. Weinman, also of New York, depicting Jefferson reading a draft of the Declaration of Independence to a Committee of the Continental Congress including, among others, Franklin, Adams, and Livingston. The veracity of these sculptured portraits was to a measure confirmed by a collection of portraits of Jefferson and his contemporaries, painted by the artists of their day, assembled and set forth in celebration of the occasion by the National Gallery of Art.

Two very acceptable gifts of sculpture were received by the National Gallery in 1943. These were "La Surprise" by Clodion, given by Mrs. Jesse Isidor Straus of New York in memory of her husband, formerly Ambassador to France; and "The Age of Bronze" by Rodin, given by Mrs. J. W. Simpson. Sculpture from the Widener Collection helped to fill the gap occasioned by the removal, for the duration, of notable works comprised in the Mellon and Kress gifts.

A bronze statue of Sir William Blackstone by Paul Bartlett was given to the United States for placement in Washington by the sculptor's widow. This was originally produced under commission from the American Bar Association to stand outside of The Temple in London. On being placed within the famous Law Courts the sculptor found it too large and therefore remodeled the subject on a slightly smaller scale and had it cut in stone. The original in bronze, thus released, is to stand on the plaza in front of the District of Columbia Court House in Washington.

The National Sculpture Society limited its annual exhibition in 1943 to ecclesiastical subjects, shown for the most part through the medium of photographs.

Acquisitions. The Art Museums purchases during 1943 strengthened their permanent collections, funds from endowments being available for this and no other purpose. Among the most notable of the works thus acquired were the following:

"Virgin and Child" by Murillo from the Santiago Collection, Madrid, by the Metropolitan Museum of Art; "Virgin and Child in Glory with Saints" by Veronese and "Gentleman with a Book" by Titian, by the Museum of Fine Arts, Boston; "Don Juan Antonio Guerva" by Goya and "Mille. Romaine Lacoux" by Renoir, by Cleveland Museum of Art; "Marquese de Fortana" by Goya, portraits by Van Cleve and Mary Cassatt, and landscape by Monet, by Joslyn Memorial, Omaha; "Wroth of Neptune" by Rubens, by the Fogg Museum, Harvard; "Lady Gudeford" by Hans Holbein, the Younger, by the City Museum, St. Louis; "The Dance" by Jean Baptiste Pater, by the Worcester Art Museum; "Joshua Henesshaw" by Copley, by Palace of the Legend of Honor, San Francisco; "St. George and the Dragon," a French primitive, and Landscape by Cezanne, by Toledo Museum; Landscape by Albert P. Ryder, by Carnegie Institute; "Croquet" by Winslow Homer, Still Life by Manet, "Poly-crates Received the Fish" by Salvator Rosa, by the Art Institute of Chicago.

The Modern French and American Schools were not as much neglected as this might seem, various works by their leading exponents finding their way on further lists of Museum purchases.

Sales. With the many restrictions placed on wartime spending it was astounding to learn at the close of the season of 1942-43 that the auction

sales of art conducted by the Parke-Bernet Galleries in New York during that period had amounted to \$3,611,847, the second highest in ten years; the highest amount realized by any one collection was \$266,207 given for that of Mr. and Mrs. Charles F. McCann.

One of the most notable sales of the season was of American furniture and *objets d'art* assembled by Mr. and Mrs. Vincent Lockwood, the former long a leading authority on the subject. The highest price at this sale—\$1,650—was paid for a New Hampshire block front secretary of maple with scrolled pediment made in 1782. For a child's inlaid scrutoire on frame the Metropolitan Museum paid \$1,060. The Victorian collection assembled and sold by Mrs. Juliana Force, Director of the Whitney Museum of American Art, is said to have established values for furniture of that era.

Some very distinguished works came under the hammer in the Parke-Bernet sales. These all brought good prices. For example, a painting by Franz Hals of *The Reverend Caspar Sibelious*, from the Frank D. Stout Collection, brought \$30,000, and *The Vintager* by Velasquez, \$15,000. A complete copy of volume 1 of the original folio edition of Audubon's *Birds of America* sold for \$3,900. *Adam and Eve* by Dürer, an engraving, sold for \$3,900, Rembrandt's etching *The Three Trees* for \$2,600, and Bartolozzi's stipple engraving of *Miss Farron* as painted by Lawrence, \$1,000.

Works by French Impressionists have continued to hold attention and maintain high price. To this fact the sale of the Frank Crowninshield collection at the Parke-Bernet Galleries in October bore ample testimony. At this sale of paintings, drawings, prints, and illustrated books, \$181,747 was spent. The books alone brought \$50,382. They were chiefly those classics of French literature published by Vollard and others in Paris, which famous contemporary French artists had illustrated. Almost all the purchasers were said to be newcomers not yet known as collectors.

Late in December the J. P. Morgan Collection, comprising 42 old-world masterpieces, was exhibited and privately sold at the Knoedler Galleries, New York, to liquidate the Morgan estate. The total value of this collection was placed, previously, at \$2,000,000 but no report was made of the amount realized at this final sale. Works by Rembrandt, Van Dyck, Goya, Gainsborough, and others were included in the catalogue.

See articles on academies; SOCIETIES under *Artists and Arts*; ARCHAEOLOGY.

LEILA MECHLIN.

ARTERIAL HYPERTENSION. See MEDICINE.

ARTILLERY. See chart under BUSINESS REVIEW; MILITARY PROGRESS under WEAPONS; PHYSICS.

ARUBA. See CURAÇAO.

ASBESTOS. Failure of Canadian spinning fiber, upon which the United States depends for most of its requirements, to keep pace with consumption left this country at the end of 1943 with a minimum inventory. An anticipated shortage in certain fiber grades, notably 3F, 3K, 3R, and 3T, forced the War Production Board to impose more stringent use control, effective November 1, by revision of Order M-79.

Conversely, fiber from Africa, the second principal source for the United States, was received on schedule in sufficient quantities to meet all needs and provide satisfactory inventories at the end of the year. To encourage its use, WPB ordered that no person should process Canadian

spinning fiber grade 3R for textile purposes in greater proportion than five tons for every one ton of Rhodesian fiber grade C & G/3. Since January, 1943, fiber from the two leading African producing companies has been imported by the Federal government, and allocated upon the basis of urgency. At the end of the year, there was discussion of returning the purchase function to private companies during 1944.

Domestic production, mostly in the shorter grades, probably amounted to less than five per cent of total requirements during 1943. Arizona and Vermont were principal producing States, with activity in North Carolina, Georgia, and California.

Chrysotile asbestos, the variety most often employed by industry, is produced principally in Canada (in the province of Quebec), Rhodesia, Union of South Africa, Swaziland, and Soviet Russia. The last-named country stands next to Canada on a tonnage basis, most production being in the shorter grades and coming from the Bajenova district of the Urals. Rhodesian chrysotile, characteristically low in iron, is particularly fitted for electrical insulation.

Amosite asbestos, mined only in Africa, is in demand for lightweight insulation. Long, strong fibers contribute to its superiority for insulation of warship steam machinery. It is also employed for making 85 per cent magnesia pipe covering and block insulation of a similar type that contains no magnesia.

Crocidolite (blue asbestos) is preferred to asbestos-cement pressure pipes, chemical filters, and acid-resistant packings. Long blue fiber is used in making gas masks. This variety is mined principally in Africa. (The Union of South Africa is unique in that it has produced, in varying amounts, five kinds of asbestos—chrysotile, crocidolite, amosite, anthophyllite, and tremolite.) Some crocidolite of premium quality is mined in the rugged Hammersley ranges of western Australia.

Although its production is limited by comparatively small demand, most occurrences in the United States are of the amphibole varieties, anthophyllite and tremolite. The latter, acid resistant, is used for making chemical filters.

Production figures and imports have not been released since September, 1941 (see 1943 YEAR BOOK).

CHARLES T. POST.

ASCENSION ISLAND. See ST. HELENA.

ASHANTI. See GOLD COAST.

ASHMORE AND CARTIER ISLANDS. See AUSTRALIA under *Overseas Territories*.

ASIA. Including the Asiatic part of the U.S.S.R., the continent has an area of about 16,752,600 square miles and a population estimated at 1,200,000,000. See the separate articles on ARABIA, CHINA, INDIA, JAPAN, MANCHUKUO, and the other Asiatic states and territories; also ARCHAEOLOGY, WORLD WAR, ETC.

ASIR. See ARABIA under *Saudi Arabia*.

ASSASSINATIONS. See BELGIUM and the other occupied countries of Europe, under *History*.

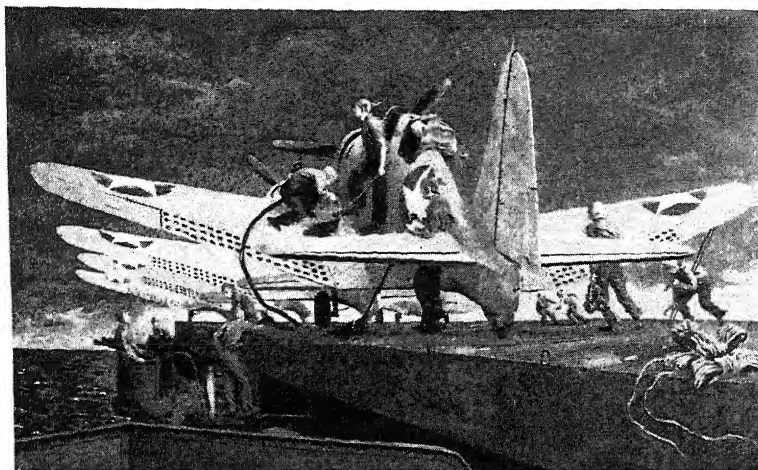
ASSEMBLIES OF GOD, General Council of the. A religious organization incorporated in Arkansas in 1914 by a group of independent pastors interested in a distinctively evangelistic type of mission work. Headquarters, 336 W. Pacific Street, Springfield, Mo. For statistics, see RELIGIOUS ORGANIZATIONS.

ASSOCIATED PRESS SUIT. See NEWSPAPERS.



HIGH LIGHTS IN THE ART WORLD IN 1943

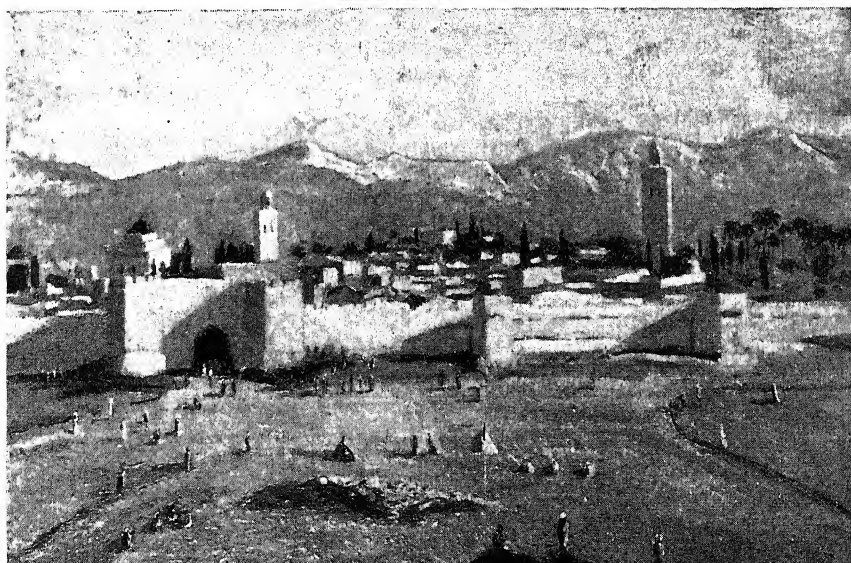
Upper Left: Portrait of "The Reverend Caspar Sibelius," by Franz Hals, which brought \$30,000 at The Parke-Bernet Galleries. Right: A memorial group, "Vision, Fortitude, and Kindness," by Brenda Putnam, presented to the city of Lynchburg, Va., by Dr. Rosalie Slaughter Morton, as "a tribute to the sons and daughters of our city of the hills." Below: The cellist, "Gregor Piatigorsky," by Wayman Adams, awarded first prize in The Carnegie Institute's invited exhibition entitled Painting in the United States.



"Serviced and Ready," a painting by Lawrence Beall Smith, in the exhibit, Naval Aviation, at the National Gallery of Art.



"Tallying the Convoy," a painting by Anton Otto Fischer, Lt. Commander, U.S. Coast Guard. Courtesy of *Life* magazine, by whom the painting was commissioned.



ARTISTS IN THE WAR

"Marrakech, Morocco," a landscape painting by Winston Churchill, made in 1929, and presented by the Prime Minister to President Roosevelt after the conference at Casablanca, January, 1943. Courtesy, The National Archives.

ASSOCIATIONS. See SOCIETIES.

ASTP. Army Specialized Training Program. See EDUCATION; LIBRARY PROGRESS; UNIVERSITIES.

ASTRONOMY. See COMETS; CHEMISTRY under Astronomy.

ATC. Air Transport Command. See AERONAUTICS.

ATLANTIC, Battle of the. See NAVAL PROGRESS; SHIPPING; WORLD WAR.

ATLANTIC DECLARATION (or CHARTER). See EGYPT under History. For text, see 1942 YEAR BOOK, p. 46-47.

ATROCITIES. See CHINA, GERMANY, JAPAN and each of the occupied countries of Europe, under History; UNITED NATIONS.

ATTU. See WORLD WAR under The War in the Pacific.

AUSTRALIA. A self-governing dominion of the British Commonwealth of Nations. Capital, Canberra.

Area and Population. The area of the six States and two Territories, the census population of June 30, 1933, and the estimated population on Sept. 30, 1942, exclusive of aboriginals, are shown in the accompanying table.

AREA AND POPULATION OF AUSTRALIA

States and Territories	Area in sq. miles	Population June 30, 1933	Sept. 30, 1942
New South Wales...	309,433	2,600,847	2,841,514
Victoria.....	87,884	1,820,261	1,968,271
Queensland.....	670,500	947,534	1,034,975
South Australia....	380,070	580,949	608,740
Western Australia...	975,920	438,852	470,649
Tasmania.....	26,215	227,599	239,706
Northern Territory..	523,620	4,850	8,555
Aust. Capital Terr...	939	8,947	12,231
Totals.....	2,974,581	6,629,839	7,184,641

For the calendar year 1942 living births numbered 136,709; deaths, 75,193 (excluding deaths of Defense personnel, of internees, and of prisoners of war from overseas); marriages, 86,060. The excess of births over deaths in 1942 was 61,516. Net immigration, 1941, was 5,184. The aboriginal population at the census of June 30, 1940, totaled 73,271 (full-bloods, 47,960; half-castes, 25,311). Estimated populations of the chief cities (all of them State capitals) on Dec. 31, 1940: Sydney (N.S.W.), 1,310,530; Melbourne (Victoria), 1,076,700; Brisbane (Queensland), 335,520; Adelaide (S. Australia), 330,000; Perth (W. Australia), 228,000; Hobart (Tasmania), 66,620. The population of Darwin (Northern Territory) was 3,900; Canberra (Federal Capital Territory), 11,000.

Overseas Territories. Under the Commonwealth's political control are the Territory of New Guinea, Territory of Papua, Nauru (mandated to the British Empire), and Norfolk Island (see separate articles on each). Papua and New Guinea were merged in the single territory of Papua in 1942. Also under Australian sovereignty are the Territory of Ashmore and Cartier Islands, off the northwest coast of Australia, and the uninhabited Australian Antarctic Territory, comprising all land except Adelie Land, situated south of 60°S. latitude and between 160° and 45°E. longitude.

Education and Religion. Elementary education is free and compulsory. Less than 4 per cent of the adult population is illiterate. In 1939 there were 9,940 State schools of all types with 927,206 enrolled pupils, 1,863 private schools with 250,860 pupils, and eight universities with 14,236 students. Free kindergartens in 1940 numbered 78 with an average attendance of 3,570 pupils. Religious affiliations at the 1933 census were: Church of England, 2,565,118; Roman Catholic, 1,161,455; Pres-

byterian, 713,229; Methodist, 684,022; Catholic (undefined), 127,542.

Production. The total area under crops for 1940-41 was 21,118,189 acres; yields of the chief crops for the same year were: Wheat, 82,233,324 bu. from 12,644,646 acres; oats, 10,199,218 bu.; corn, 9,192,744 bu.; hay, 2,177,470 tons; cane sugar, 806,457 tons. Wheat production in 1942-43 was provisionally estimated at 156,820,000 bu. from 9,554,759 acres (166,632,967 bu. from 12,062,682 acres in 1941-42). Provisional 1941 livestock returns showed 125,194,587 sheep, 13,590,172 cattle, 1,616,672 horses, and 1,416,594 hogs. The 1941-42 wool clip was estimated at 1,130,000,000 lb. as in the grease. Butter output for the same fiscal year was about 168,711 tons, cheese 29,732 tons, bacon and ham 95,071,400 lb.

The value of all mineral production in 1940 was £40,002,669, of which gold accounted for £17,519,950 and coal (black and brown) for £8,327,341. The 1942 gold output was provisionally reported at 1,155,804 fine oz., valued at £12,080,245. Wartime production figures for pig iron, copper, lead, silver, tin, and zinc were not available for publication. Manufacturing statistics for 1940-41 were: Number of establishments, 27,300; number of employees, including working proprietors, 650,073; salaries and wages paid, excluding income of working proprietors, £137,919,068; value of total output, £644,794,908, of which £257,914,349 was added in process of production.

The total gross value of Australian production for 1940-41 was £550,754,000, divided as follows: Agricultural, £71,398,000; pastoral, £111,232,000; dairy, poultry, and bee-farming, £62,523,000; forestry and fisheries, £16,847,000; mining, £40,003,000; manufacturing, £248,751,000 (net value).

Foreign Trade. Merchandise imports for the year ended June 30, 1942, were £149,355,797 (£108,780,000 in 1940-41); exports, £127,208,381 (£107,445,000 in 1940-41). For the main export items by value, see 1942 YEAR BOOK.

Finance. Receipts and expenditures of the Federal Consolidated Revenue Fund were estimated to balance at approximately £294,459,156 in 1942-43 and at £345,120,000 in 1943-44 (years ended June 30). The accompanying table shows actual receipts, expenditures and loans in 1942-43 and budget estimates for 1943-44.

AUSTRALIAN BUDGETS
(In millions of pounds)

	1942-43 (actual)	1943-44 (estimated)	Increase
Revenue:			
Taxation.....	£230	£273	£43
Other receipts.....	37	39	2
	267	312	45
Expenditure:			
War.....	562	570	8
Other.....	108	145	37
	670	715	45
Deficiency financed by loans, etc.	403	403	..

The aggregate debt of the Commonwealth and State Governments on June 30, 1943, was £2,006,000,000 (Commonwealth, £1,107,000,000; States, £899,000,000). The official exchange rate of the Australian pound was \$3.228 during 1941-43.

Transportation. Government railways open for traffic in 1941-42 extended 27,241 miles; they had gross revenues of £66,482,000 and working expenses of £51,043,000. Highways aggregated 488,749 miles in 1940 and motor vehicles registered Mar. 31, 1942, numbered 770,883. Provi-

sional civil air traffic statistics for June–December, 1942, were: Passengers, 85,391; mail, 630,000 lb.; freight, 1,086,000 lb. Radio broadcast listeners licenses in force Mar. 31, 1943, totaled 1,393,872. A total of 3,814 ships of 13,545,712 tons entered and cleared Australian ports in 1938–39.

Government. Executive power is vested in the King, who acts through a governor-general and a ministry responsible to the Federal Parliament. There is a Senate of 36 members (6 from each State), elected for 6 years and renewed by half every 3 years, and a House of Representatives of 75 members apportioned among the States on a population basis and elected for 3 years. Governor-General, Brig. Gen. Alexander Gore Arkwright, Baron Gowrie, who assumed office Jan. 22, 1936. Prime Minister in 1943, John Curtin, heading a Labor Government formed Oct. 6, 1941. Australia entered into a state of war with Germany Sept. 3, 1939; Italy, June 11, 1940; Japan, Finland, Rumania, and Hungary, Dec. 8, 1941; and Bulgaria, Jan. 6, 1942. For 1943 developments, see below.

HISTORY

Japanese Threat Banished. After a conference with Gen. Douglas MacArthur, U.S. commander-in-chief of all Allied forces in the Australian-New Guinea area, Prime Minister Curtin on June 10, 1943, announced that the holding phase of the war was over for Australia and that the period of counter-attack had arrived. This prediction was borne out by new Allied offensives in the Solomon Islands and New Guinea that drove the Japanese out of bases from which they had threatened to attack Australia (see WORLD WAR for a description of these campaigns). Thus the great tide of Japanese aggression that threatened to sweep over the Commonwealth in the spring of 1942 and was halted temporarily in the fringe of islands to the north was now definitely broken and sent reeling backward.

The danger that the Japanese would break through the Allied defenses in New Guinea and the Solomons and renew their threat to the Australian mainland remained acute throughout the first four months of 1943. This danger led the Curtin Government to recall the veteran Ninth Australian Division from the Middle East, where it had played a heroic role in the defense of Tobruk and in the Battle of El Alamein. With the return of the Ninth to Melbourne early in April, there remained in the African-European war theater only Australian air and ground units.

Two other Australian divisions sent to the Middle East at the outbreak of the war had been withdrawn to meet the Japanese threat early in 1942. The Government on April 12 also reduced the recruiting age for the Australian Imperial Forces from 19 to 18 years. The expansion of the militia forces through conscription was continued despite the increasingly serious shortage of manpower. By the end of July there were 780,000 men and 40,000 women in the fighting services; volunteers in the Australian Imperial Force, the Royal Australian Air Force, and the Royal Australian Navy totaled 530,000 and members of the conscripted militia 290,000. (See NAVAL PROGRESS.)

In addition to these home defense measures, the Curtin Government and General MacArthur pressed the Combined Chiefs of Staff in Washington and the British and American Governments for increased forces to meet what was said to be a growing concentration of Japanese strength in the islands north of Australia. Late in February Herbert V. Evatt, the Minister of External Affairs,

was sent on another visit to Washington and London to protest against the "holding" role assigned to Allied forces in the Southwestern Pacific. General MacArthur sent his Chief of Staff and his air commander to Washington on a similar mission.

Simultaneously with the announcement on March 4 of the complete destruction of a Japanese convoy in the Bismarck Sea, the House of Representatives in Canberra was informed that several complete squadrons of Spitfire planes had been delivered to the R.A.A.F. by the British Government. Returning to Sydney on July 30, Dr. Evatt stated that President Roosevelt and Prime Minister Churchill had agreed to "very substantial allocations" of additional aircraft to the R.A.A.F. Large reinforcements meanwhile had reached the United States land, sea, and air forces deployed under General MacArthur and Admiral Halsey.

Prime Minister Curtin announced June 24 that American land forces in the Southwest Pacific were equal in number to the Australian forces there and that United States air squadrons were numerically stronger than the R.A.A.F. On September 21 General MacArthur issued a statement from his New Guinea headquarters criticizing any Pacific strategy involving an "island hopping" campaign against Japan. His statement was considered a protest against the military decisions taken by Anglo-American political and military leaders at the Quebec Conference (see UNITED NATIONS).

MacArthur's seeming resentment at the alleged neglect of the Southwest Pacific command found support in some Australian circles. However Prime Minister Curtin on September 28 said the Quebec decision to create a Southeast Asia command under Lord Louis Mountbatten did not impinge upon MacArthur's command or subordinate it in any way. In an interview on October 1 Curtin declared for the first time that Australia was prepared to provide her share of troops for a campaign to recover the Philippines. The Cairo Conference and its decisions (see UNITED NATIONS) caused general pleasure in Australia. MacArthur and Curtin again met early in December to consider means of implementing the Cairo decisions. On December 3 Curtin announced that Australia "will shift its entire strategy to the offensive and will give the maximum of which it is capable in men, material, and resources." Some uneasiness was reflected in the Australian press lest the "MacArthur for President" campaign in the United States interfere with the prosecution of the war in the Southwest Pacific.

War Casualties. From the outbreak of war to Aug. 31, 1943, Australian forces suffered 61,564 casualties. Of these, 13,908 were killed in action or died of wounds, sickness, etc., 14,702 were wounded, 20,823 were taken prisoner, and 12,131 were listed as missing. The Australian hospital ship *Centaur*, brightly illuminated to distinguish it from war vessels, was sunk by a Japanese submarine the night of May 11 with the loss of about 268 lives. Australian feeling toward the Japanese was intensified in October by the disclosure in a Japanese soldier's diary picked up in New Guinea that the Japanese had beheaded a captured Australian airman. Moreover travelers reaching South Africa from French Indo-China in November reported that 22 Australians had been beheaded for undisclosed reasons out of the 965 Australian war prisoners held by the Japanese in that country. The remaining prisoners were stated to be in a pitiful condition.

U.S. Relations. Relations between Australia and the United States in the military, economic, and

political fields remained on an extremely cordial and cooperative basis during 1943. Without formal request from Washington, the Commonwealth Government on February 18 accorded the United States most-favored-nation treatment on tariffs. Supply Minister John A. Beasley on March 3 announced that the Commonwealth had accepted responsibility for feeding United States forces throughout the South and Southwest Pacific areas. Australia fed all Allied forces in MacArthur's Southwest Pacific command and aided New Zealand in feeding all those in Admiral Halsey's South Pacific command. The cost to the Commonwealth Government of reciprocal aid to the United States increased from £59,000,000 in the 1942-43 fiscal year to an estimated £100,000,000 in 1943-44 or one-sixth of the Australian budget. However the lend-lease balance in the United States' favor was £81,000,000 as of July 1, 1943, and was scheduled to increase by £100,000,000 during the ensuing year.

Speaking before the House of Representatives on the first anniversary of General MacArthur's arrival in Australia from the Philippines, Prime Minister Curtin declared that the general "not only has been a great organizer against our common enemy but has become the inspiring force in this nation." A public opinion survey in May showed 77 per cent of the Australian people in favor of granting the United States naval and air bases in Australia for a limited period after the war. Mrs. Franklin D. Roosevelt, visiting Australia in September as a representative of the American Red Cross, received a warm welcome.

Empire Developments. Prime Minister Curtin's insistence upon a greater voice for Australia in shaping Empire and Allied war policies had won for the Commonwealth during 1942 a nonvoting seat on the British War Cabinet and representation on the Pacific War Councils in London and Washington (see 1943 YEAR BOOK). In a statement on August 14, elaborated on September 6, Curtin advanced a new proposal for the establishment of a supreme consultative body within the Empire to handle mutual problems and to join with the United States and other Allied powers in the planning of postwar reconstruction. The Canadian and South African Governments showed no enthusiasm for this proposal, but it was scheduled for discussion at the conference of Dominion Prime Ministers scheduled to be held in London early in 1944. The appointment of the Duke of Gloucester, brother of George VI, as Governor General of Australia was announced November 15. He was slated to relieve Lord Gowrie in July, 1944.

In a campaign speech on August 4 Foreign Minister Evatt said that he would seek to conclude arrangements with Britain, the United States, the Netherlands, Portugal, and France for the establishment after the war of "a zone or security in the Southwest Pacific against aggression . . . from the arc of islands north of us . . ."

The Curtin and Evatt proposals for collaboration with other peace-loving nations in promoting world prosperity and security represented a complete break with the Australian Labor party's long-standing policy of isolationism and exclusive nationalism. However the new policy was unanimously approved at the triennial conference of the Australian Labor party held in Canberra in mid-December. The conference gave the Prime Minister a free hand to develop his policy subject to confirmation by the Commonwealth Parliament.

Meanwhile Australia and New Zealand tight-

ened the bonds forged to meet the threat of a Japanese attack in 1942. The New Zealand Prime Minister announced on February 12 that as a result of the political-military discussions held the preceding July, the two Dominions had pledged mutual aid in the event of an attack. Cooperation between Australia and New Zealand in supplying food to Allied forces on islands of the South and Southwest Pacific was agreed upon at a conference in Canberra early in September of representatives of Australia, New Zealand, the French Committee of National Liberation, and the U.S. Office of Economic Warfare. This program was administered by a special Pacific Supply Division set up within the Australian Department of Supply.

Internal Politics. A general election that returned the Labor party to power, adoption of a measure permitting conscription for military service in the islands north of Australia, and the development of plans for postwar reconstruction were the main internal political developments of the year.

Conscription Issue. A special interstate conference of the Australian Labor party convened in Melbourne January 4 to consider Prime Minister Curtin's proposal for amendment of the conscription act, which restricted the use of the drafted militia forces to the Australian mainland (see 1943 YEAR BOOK, p. 56). The Prime Minister won the reluctant consent of his party to the partial abandonment of its historic opposition to conscription for overseas service. On January 29 he introduced in Parliament a bill authorizing the use of militia and other drafted troops anywhere south of the equator in the zone between the 110th and 159th meridians East longitude, conditional upon the issuance of a special proclamation specifying the particular area of service. The bill was passed by the House on February 11 and by the Senate on February 18, despite Opposition criticism that it was a halfway measure that had no relation to military or strategic necessities. An Opposition motion removing all restrictions on the use of conscripts outside of Australian territory was defeated in the House 34 to 29 on February 24.

Strike Difficulties. Another challenge to the Government's position and prestige came from elements within the labor unions and the Labor party who opposed the Curtin conscription law and the Government's stringent regulations for the maintenance of war production and essential war services.

On New Year's Day about 37,000 Sydney workers took a holiday in violation of the National Security Regulations. Cabinet members vigorously denounced the walkout as "a blot on the nation's war effort" and several hundred of the alleged ringleaders were prosecuted under the regulations. Nevertheless a wildcat strike by 4,000 Sydney stevedores took place at the end of March in defiance of the orders of the workers' union officials. More than 4,000 United States and Australian troops took over the work of loading and unloading ships until the dock workers' strike collapsed. Another one-day walkout by 30,000 workers in the metal trades occurred in Sydney on May 3 after the Government had refused to grant them an extra holiday for Anzac Day, which fell on Sunday. There were repeated short stoppages by the New South Wales coal miners. To check these disturbances, the Cabinet on May 18 issued a "work or fight" ruling authorizing the drafting for national service of any employee or employer in any industry exempted from military conscription who failed to perform his duties,

According to Government spokesmen, the ring-leader of these labor disturbances was John Thomas Lang, former Labor Premier of New South Wales and a bitter opponent of Prime Minister Curtin. A showdown between the two men took place at the annual conference of the New South Wales Labor party in Sydney the first week in June. The conference endorsed Lang's expulsion from the Labor party, reaffirmed its opposition to a common front with the Communists, and voted its complete confidence in the Curtin Government.

Despite labor difficulties, Australia's war production reached a high level during 1943, with 48 per cent of the working population in the armed services or engaged in defense construction and the manufacture of munitions. Only 28 per cent of the country's manufacturing capacity was engaged on civilian production. The drawing of too many men from farms and ranches led to dwindling food production and forced the Government in October to announce the rationing of meat, effective in January. On November 12 the Prime Minister announced that Australia would undertake the manufacture of heavy bombers to end its dependency upon foreign aircraft of this type.

Postwar Reconstruction. Another important issue was the Curtin Government's program for planned postwar reconstruction, the success of which hinged largely on the ratification by the six States of the constitutional amendment adopted Dec. 2, 1942. The measure transferred 14 specific powers from the States to the Federal Government for a period of five years after the cessation of hostilities. Coming before the State Parliaments early in 1943, it was passed unaltered in New South Wales and Queensland, passed with minor amendments in Victoria and Western Australia, passed in substantially weakened form in South Australia, and deferred for a year by the Parliament of Tasmania.

Without waiting for ratification of the amendment, the Ministry of Postwar Reconstruction established Dec. 2, 1942, proceeded with investigations and plans for directing the transition of Australia's economy from a war to a peace basis, and for raising general living standards. In brief, the program called for the rehabilitation of agriculture, expansion of secondary production, decentralization of industry, housing development, slum clearance, intensive national works (especially water conservation and extension of electrical facilities), improved nutrition, better hospital and medical services, the retraining of soldiers and war workers for peacetime jobs, etc.

In addition to its long-range reconstruction program, the Government sought to prevent inflationary economic forces from getting out of hand by boosting the income tax by 30 per cent in February to probably the highest level of any of the United Nations; by greatly extending the price-control system in mid-April; and by broadening both food rationing and food production measures. Attached to the income tax bill was a National Welfare Fund Bill setting aside £30,000,000 of new taxation annually for a social welfare scheme trust fund to be brought into full operation after the war.

The General Election. The Labor Government's handling of these and other war problems, and the marked improvement in the Commonwealth's military position enabled Prime Minister Curtin and his associates to score an overwhelming victory in a general election held August 21. For the first time since 1914, Labor won firm control of both houses of the Federal Parliament. It cap-

tured 51 of the 74 seats in the House of Representatives and 22 of the 36 seats in the Senate (most of the newly elected Senators were to take their seats in July, 1944). Previous to the election, Labor lacked two seats of having a majority in the Senate and was dependent for its control of the House upon the two Independent members. This precarious balance of power had placed the Government under a serious handicap in prosecuting the war.

The election was precipitated shortly before the expiration of the three-year term of the House by the Opposition coalition, of the United Australia and Country parties. No sooner had Parliament reconvened on June 21 than a no-confidence motion was introduced in the House by A. W. Fadden of the Country party, official leader of the Opposition and Curtin's predecessor as Prime Minister. He charged the Government with weakness in handling strikes, bungling of the food problem, mismanagement of national finances and manpower, and neglect of rural industries. The ensuing debate was embittered by the accusation directed at the Opposition by Minister of Labor E. J. Ward to the effect that an important document pertaining to the former Fadden Government's war policy was missing from the official files. Prime Minister Curtin agreed to the appointment of a Royal Commission to investigate the charge, meanwhile suspending the Labor Minister from his post.

The Government defeated the no-confidence motion on June 24 by a 27-to-26 vote. However the narrow margin of his victory, following recurrent parliamentary crises, convinced Curtin that Parliament as constituted was unworkable, and he called for its dissolution. In the ensuing campaign, the Labor Government stood on its record, while the Opposition demanded a national or all-party government for the duration of the war. Fadden declared that if he regained control of the Government he would renew the ban on the Communist party, which was lifted by the Labor Government Dec. 18, 1942. The Communists, however, made a poor showing in the election, failing to win a single seat. Their membership in March was reported at only 17,000.

The smashing defeat of the Opposition was followed by the dissolution of the coalition by mutual consent on September 22. Fadden remained head of the Country party and former Prime Minister Robert Menzies was elected leader of the United Australia party. At a Labor party caucus on September 20 all members of the previous Labor party Ministry except Minister of Transport George Lawson were reelected for Cabinet positions. Arthur Calwell was chosen to replace Lawson.

In the elections to the State Legislative Assembly held in Western Australia in November the Labor party slightly increased its majority in the House.

Other Developments. The Cabinet in July approved a decree for the amalgamation of the mandated Territory of New Guinea with the Territory of Papua, effective upon the expulsion of the Japanese. Australia's highest court, by a 3-to-2 decision on June 14, declared invalid the Government's suppression of the Jehovah's Witnesses sect under the National Security Subversive Associations regulations. The decision in effect nullified the whole set of regulations.

See AQUEDUCTS; BIRTH CONTROL; CHEMISTRY under *Foreign*; DAMS; JAPAN under *History*; LEAD; LEND-LEASE PROGRAM; SOCIALISM; WORLD WAR.
RONALD STUART KAIN.

AUSTRALIAN ANTARCTIC TERRITORY. See *AUSTRALIA* under *Overseas Territories*.

AUSTRIA. A former independent state of central Europe, annexed by Germany on Mar. 13, 1938, and divided on Apr. 1, 1940, into seven administrative districts of the German Reich. Area, 32,369 square miles; population at census of May 17, 1939, 6,650,000, divided into administrative districts as follows: Vienna, 1,929,976; Lower Danube, 1,697,976; Upper Danube, 1,034,871; Styria, 1,116,407; Carinthia, 449,713; Salzburg, 257,226; Tirol and Vorarlberg, 486,400. Vienna, the former capital, had 1,918,462 inhabitants at the 1939 census; Graz, 210,175; Linz, 131,423.

Roman Catholics comprised 90.57 per cent of the population at the 1934 census; Protestants, 4.38 per cent; Jews, 2.83 per cent (191,481). The 1939 census showed 94,270 racial Jews. Agriculture, manufacturing, mining, and lumbering are the main occupations (see *YEAR BOOK* for 1939, p. 57 for pre-annexation statistics). Iron ore production increased from 1,900,000 metric tons in 1937 to an estimated 3,500,000 metric tons in 1941.

Government. Upon the annexation of Austria, Chancellor Hitler appointed Josef Buerckel as Procurator for the Liquidation of Austria and Reich Commissar for the Reunion of Austria with Germany. Austria was subdivided into seven districts (Gaue), each under a National Socialist responsible to Herr Buerckel in Vienna, who in turn was directly responsible to Chancellor Hitler. Effective Apr. 1, 1940, this system was reorganized. The Nazi leader in each district was given the title Gauleiter (district leader) and Procurator, combining party and state functions, and became directly responsible to Hitler.

History. Reports from both Nazi and anti-Nazi sources in Austria during 1943 indicated a steady growth of unrest, sabotage, and underground warfare against the Hitler regime. The Nazi authorities retaliated with scores of executions and numerous arrests and deportations. The American Federation of Austrian Democrats made public in New York City in May a manifesto said to have been drawn up at a secret conference of Catholic, Socialist, and other underground leaders in the Austrian mountains and broadcast over a secret Austrian Freedom Station, operating somewhere in Europe. The statement called for constant warfare against the "Nazi-Prussians." Late in July Swiss reports stated that news of Mussolini's overthrow in Italy had been followed by anti-Nazi demonstrations in Vienna and other Austrian cities, which were suppressed by the police.

Apparently Austrian unrest was accentuated by the steady influx of Germans and of foreign industrial workers driven from western and central Germany by the growing Anglo-American air raids. There were frequent reports of the shifting of German war industries to the Austrian provinces during the first half of the year. In mid-August Swiss sources stated that many departments of the German Government had been moved from Berlin to Vienna. Immediately afterward United States bombers based in North Africa made their first raid into Austria (August 13), striking at the large Messerschmitt aircraft factory at Wiener Neustadt. The subsequent Allied invasion of Italy brought the whole of Austria within easy range of their heavy bombers and led to the evacuation of many civilians from Vienna.

On November 1 the Moscow Conference of Anglo-American-Soviet Foreign Ministers issued a

Declaration in favor of "a free and independent Austria" stating that in the final settlement account would be taken of Austria's own contribution to her liberation (see *UNITED NATIONS*). Announcement of this policy was followed by reports of more serious anti-German outbreaks in Austria and of severe repressive action by the Gestapo.

The War Department in Washington announced December 11 that the Austrian battalion in the U.S. Army, in which Archduke Otto von Hapsburg and two of his younger brothers had enlisted, had been disbanded for lack of sufficient volunteers (see 1943 *YEAR BOOK*, p. 59). See *LEND-LEASE*; *UNITED NATIONS*.

AUTOMOBILES. See *MOTOR VEHICLES*.

AUTOMOTIVE SAFETY FOUNDATION. See *PHILANTHROPY* under *Foundation Activities*.

AVIATION. See *AERONAUTICS*. For *Aviation Gasoline*, see *CHEMISTRY* under *Petroleum*; *MINES, BUREAU OF*; *PETROLEUM ADMINISTRATION FOR WAR*.

AVRO YORK. See *AERONAUTICS* under *British Types*.

AWARDS. See the subject, as *CHEMISTRY*, *MOTION PICTURES*, *THEATER*; also, *PULITZER PRIZES*; *SOCIETIES*.

AXIS POWERS. The coalition of powers which opposed the United Nations in World War II, comprising Germany, Italy, Japan, Bulgaria, Finland, Hungary, Rumania, Thailand, the puppet states of Croatia, Manchukuo, and Slovakia, and the Nanking puppet regime in China. Dates on which a state of war began between the individual Axis Powers and United Nations are given in the table under *WORLD WAR*. For a brief description of the alliances and understandings forming the basis of the Axis coalition, see the 1943 *YEAR BOOK*, p. 59. For the military and other developments during 1943, see *WORLD WAR* and the article on each country. See *ARGENTINA*, *CHILE*, and *COLOMBIA* under *History*; *PAN AMERICANISM*.

AZERBAIJAN SOVIET SOCIALIST REPUBLIC. See *UNION OF SOVIET SOCIALIST REPUBLICS* under *Area and Population*.

AZORES. A group of nine Portuguese islands in the Atlantic Ocean about 800 miles west of Portugal and some 2,100 miles from New York. Area, 922 square miles. Population (1940 census), 284,755. The largest island, São Miguel (297 sq. mi.), contains more than one-half of the population. Capital and chief seaport, Ponta Delgada (pop. 19,824 in 1940) on São Miguel. The other islands are Corvo, Fayal (64 sq. mi.), Flores (57 sq. mi.), Graciosa, Pico (175 sq. mi.), Santa Maria, São Jorge, and Terceiro (223 sq. mi.). Angra (pop. 11,706) on Terceiro and Horta (pop. 8,407) on Fayal are the other leading cities. The Azores form a province of Portugal and are divided, for political and administrative reasons, into three districts—Angra do Heroísmo, Horta, and Ponta Delgada. For an account of the 1943 agreement granting naval and air bases to Great Britain for the duration of World War II see *PORTUGAL* under *History*.

Agriculture, dairying, and needlework are the chief occupations. The principal crops are corn, hothouse pineapples, sugar beets, wheat, tobacco, and fruits. Imports come mainly from Portugal. In normal times, pineapples are exported to northern Europe and embroidery to the United States. Horta is a seaplane base on Pan American Airways' transatlantic route from New York to Lisbon, and an important cable station.

BADMINTON. Despite a falling off in tourney competition, badminton probably gained in popularity during 1943, for many of those thousands of Americans who became "stay-at-homes" because of gasoline rationing discovered that badminton in their own backyards provided great fun and healthy recreation.

The national title tournament was canceled for the first time. Holdover champions are Guthrie Freeman, Pasadena, men's singles; Evelyn Boldrick, San Diego, women's singles; Freeman and Chester Goss, Hollywood, men's doubles, and Miss Boldrick and Janet Wright, San Francisco, women's doubles.

THOMAS V. HANEY.

BAHAMAS. A British West Indian colony comprising 20 inhabited and several uninhabited islands and rocks. Land area, 4,404 square miles. Population (1941 estimate), 71,474. Chief islands: Abaco, Acklins, Andros, Bimini, Cat Island, Crooked Island, Eleuthera, Exuma, Grand Bahama, Inagua, Long Island, Mayaguana, New Providence, Rum Cay, and San Salvador (or Watlings). Capital, Nassau (on New Providence), 20,000 inhabitants. Vital statistics (1941): 2,436 births and 1,044 deaths.

Production and Trade. Shell (tortoise and conch), cascarilla bark, pine timber, salt, tomatoes, sisal, and crawfish are the main products. The combined expenditures of the 25,000 tourists who visited the islands during 1941 amounted to \$4,000,000. Sponge fishing was prohibited pending a recovery from the disease which attacked the beds during December of 1941. Trade (1941): imports £1,519,029; exports £301,858. Shipping (1941): 1,377 vessels aggregating 635,666 tons entered. Air services are in operation with the United States, and among the chief islands of the Bahamas.

Government. Budget estimates (1942): revenue £394,690; expenditure £439,889. Public debt (Dec. 31, 1941) £245,000. Executive power rests with the Governor, assisted by an Executive Council of 8 members. There is a legislature consisting of a Legislative Council (9 nominated members) and a House of Assembly (23 elected members). Governor and Commander in Chief, the Duke of Windsor (assumed office Aug. 17, 1940).

History. The U.S. State Department and the Bahamian Government, on March 16, 1943, made an agreement providing for the importation of Bahamian agricultural workers into the United States. By September about 5,000 Bahamians had gone to work on American farms. On Sept. 15, 1943, the Governor stated that the islands were enjoying the greatest prosperity in their history. They had lost their tourist trade but prosperity was brought about by the construction of airfields,

sugar, rice, coffee and salt pork were placed on ration lists. See HURRICANES.

BALEARIC ISLANDS. See SPAIN under *Area and Population*.

BALI. See NETHERLANDS EAST INDIES under *Area and Population*.

BALKAN STATES. The countries of the peninsula south of the Danube, and bounded by the Adriatic, Aegean, and Black Seas. See ALBANIA, BULGARIA, GREECE, RUMANIA, TURKEY, YUGOSLAVIA.

BALLET. See MUSIC.

BANCOR. See POSTWAR PLANNING under *International*.

BANGKA. See NETHERLANDS EAST INDIES under *Area and Population*.

BANK ROBBERY. See FEDERAL BUREAU OF INVESTIGATION.

BANKRUPTCY. See BUSINESS REVIEW.

BANKS AND BANKING. The banking system completed in 1943 a second year of war financing without any difficulty or extraordinary strain. Through the improved organization of its war loan drives, the Treasury succeeded in expanding sales of new Government security issues to investors other than banks to a point that enabled it to leave banks out of the Third War Loan drive in September, 1943. For the year as a whole, however, the commercial banks not only absorbed some \$16,000,000,000 of additional Government securities in their portfolios, but also facilitated sales of Government securities to other purchasers through an expansion of collateral loans against Treasury obligations. The further increase in Government security holdings of the banks produced a corresponding growth in deposits, which increased by some \$10,000,000,000 during the year to the highest level recorded. The Federal Reserve banks provided their members with the additional reserves made necessary by a sharp rise in currency circulation and these added deposits by purchasing Treasury bills to the extent offered by member banks, at the fixed buying rate of $\frac{3}{8}$ of 1 per cent discount. As a result, despite increased deposits and the expansion of currency in circulation, excess reserves of member banks were maintained around the billion dollar mark through the latter part of the year, after declining from the two billion dollar level in the early months.

The highlights of changes in the commercial banking system as a whole during the year ended June 30, 1943, are shown in Table 1, a comparison of major items from the annual statement of commercial banks insured by the Federal Deposit Insurance Corporation:

TABLE 1—PRINCIPAL ASSETS AND LIABILITIES OF INSURED COMMERCIAL BANKS
(In thousands of dollars)

	June 30, 1942	Dec. 31, 1942	June 30, 1943
Reserve with Federal Reserve Banks	12,294,505	13,071,533	12,092,461
Other balances with banks	8,119,105	9,098,277	8,455,689
U.S. Govt. obligations, direct & fully guaranteed	25,936,082	40,711,697	51,541,848
Other securities	6,790,846	6,632,557	6,348,275
Loans, discounts, and overdrafts (incl. rediscounts)	19,922,804	18,906,869	17,392,157
Demand deposits (of individuals, partnerships, and corporations)	39,266,281	47,128,273	53,423,385
Time deposits (of individuals, partnerships, and corporations)	14,889,560	15,706,335	16,897,124
Total deposits	71,162,431	87,620,427	94,582,453
Total liabilities and capital account	78,709,455	95,459,111	102,405,464

the garrisoning of troops, the dispatch of 5,000 farm laborers to the United States, the development of a large fish cannery at Grand Bahama, and the sale of sisal to the United States. Food rationing commenced on July 11, 1943, when lard, white

Commercial Banking. A striking feature of the financing of the present war has been the extent to which the Federal Government has provided industry with both the long-term and the working capital required to finance war production. As a result,

industries devoted to producing armaments and munitions found it necessary to resort only to a very limited extent to bank loans or new security issues. On the other hand, the volume of Government financing necessary has been far greater than would have been the case if a larger share of war production had been financed through private channels. The impact of the second year of war financing upon the commercial banks of the country from month to month during 1943 is illustrated by the statistics of reporting member banks in leading cities in Table 2.

TABLE 2—LOANS, INVESTMENTS, AND DEPOSITS OF REPORTING MEMBER BANKS IN 101 LEADING CITIES
[Monthly data are averages of weekly figures. In millions of dollars]

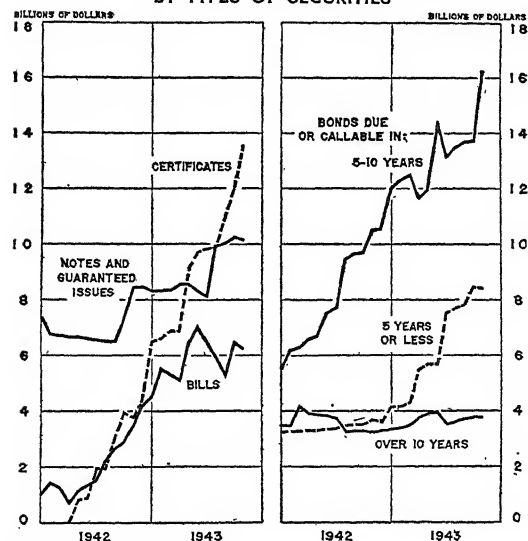
Months of 1943	Commercial, industrial, and agricultural loans	Loans to brokers and dealers in securities	Other loans for purchase or carrying of securities	All other loans	U.S. Government obligations		Other securities	Demand deposits adjusted
					Direct	Guaranteed		
January.....	6,183	604	360	2,679	26,350	1,920	3,287	29,215
February.....	6,097	624	350	2,653	26,576	1,908	3,267	30,412
March.....	5,981	574	339	2,609	27,094	1,927	3,261	31,956
April.....	5,822	1,153	422	2,616	28,248	1,969	3,219	31,591
May.....	5,757	1,334	565	2,605	31,781	1,828	3,088	30,354
June.....	5,606	998	450	2,539	32,049	1,878	3,069	32,199
July.....	5,612	1,034	399	2,504	32,060	1,798	2,963	33,108
August.....	5,718	1,026	368	2,459	32,625	1,796	2,911	34,250
September.....	5,966	1,566	621	2,526	33,367	1,844	2,949	33,418
October.....	6,342	1,912	1,054	2,636	35,612	1,868	2,922	31,062
November.....	6,442	1,589	824	2,585	35,944	1,815	2,837	32,416
December 29.....	6,437	1,328	556	2,518	34,351	1,758	2,786	33,895

The Government securities purchased by the banks during 1943 were chiefly certificates of indebtedness and notes and bonds falling due within ten years, as shown by the accompanying chart, based on reports received by the Treasury from approximately 5,800 commercial banks.

The decline in commercial loans by banks which characterized the first year and a half of the war came to an end in June, 1943. The total loans of

commercial and industrial loans, which had fallen to approximately \$7,000,000,000 on June 30, 1943. Since June, 1943, a substantial increase in commercial loans has occurred, particularly by banks outside of New York City. A part of this increase reflected bank financing of war production. The Government announced on Sept. 1, 1943, a broadening of the basis under which the War and Navy Departments and the U.S. Maritime Commission guaranteed bank loans to war contractors and subcontractors, through the agency of the Federal Reserve banks, up to 90 per cent of the amount loaned. In

COMMERCIAL BANK HOLDINGS OF GOVERNMENT SECURITIES BY TYPES OF SECURITIES



Federal Reserve Bulletin

Based on reports received by the Treasury from approximately 5,800 commercial banks.

all commercial banks aggregated approximately \$17,700,000,000 at the end of that month, representing a decline of approximately \$4,000,000,000 from the beginning of 1942. More than half of this total decrease was represented by a decline in com-

mercial and industrial loans, which had fallen to approximately \$7,000,000,000 on June 30, 1943. Since June, 1943, a substantial increase in commercial loans has occurred, particularly by banks outside of New York City. A part of this increase reflected bank financing of war production. The Government announced on Sept. 1, 1943, a broadening of the basis under which the War and Navy Departments and the U.S. Maritime Commission guaranteed bank loans to war contractors and subcontractors, through the agency of the Federal Reserve banks, up to 90 per cent of the amount loaned. In

order to assure those engaged in war production that their working capital would not be frozen in the event of Government contract termination, it was provided that the payment of interest on such loans would be assumed by the Government once contracts had been terminated. Such Government guaranteed bank loans to war contractors, providing for the contingency of contract cancellation, were referred to as "VT" loans. During the first nine months of 1943, the amount of "V" and "VT" loans actually outstanding increased by approximately \$900,000,000.

Another reason for the increase in bank loans

was the substantial volume of advances made to subscribers to Government security issues. In connection with each successive war loan drive, a sharp increase in loans secured by Government obligations occurred, but such advances were rapidly repaid after the war loan drives were completed.

The continued increase in bank deposits reduced the ratio of capital funds to deposits for most banks well below the traditional 1:10 ratio considered standard in the past. Supervisory authorities noted this development, but felt that it was not serious because of the unprecedentedly high proportion of Government bonds in commercial bank portfolios. However, banks were urged to favor shorter term obligations in adding to their holdings of Government securities, so as to minimize the risk of price fluctuations, and to be conservative in dividend declarations, so as to add to undivided profits and surplus from reinvested earnings. The distribution of maturities of Government securities held by 6,149 commercial banks on Sept. 30, 1943, is shown in Table 4.

TABLE 4—PUBLIC MARKETABLE TREASURY SECURITIES HELD BY COMMERCIAL BANKS

Due or Callable	Amount Held
Within 1 year.....	\$22,228,000,000
1 to 5 years.....	14,742,000,000
5 to 10 years.....	13,700,000,000
10 to 15 years.....	2,265,000,000
15 to 20 years.....	614,000,000
Over 20 years.....	901,000,000
FHA debentures.....	7,000,000
Total.....	\$54,457,000,000

Expansion of Money in Circulation. An accelerated increase of money in circulation was an outstanding development of the year in the banking field. Currency in circulation rose sharply each month during the year, from \$15,410,000,000 at the end of 1942 to over \$20,000,000,000 at the end of 1943. Expanded payrolls and the high level of retail trade contributed to the increase in circu-

banks who retained an option to repurchase them, whenever their reserve position would permit it. Thus, the Treasury bill has become increasingly the chief instrument for credit control in the money market, member banks looking upon their Treasury bill portfolio as a means for securing Federal Reserve credit for whatever period is required through sale of these obligations, under repurchase option,

TABLE 5—PAPER CURRENCY AND COIN IN CIRCULATION
[In millions of dollars]

End of month	Total in circulation	Coin and small denomination currency				Large denomination currency				Total	Unas-			
		Total	Coin	\$1	\$2	\$5	\$10	\$20	\$50	\$100	\$500	\$1,000	\$5,000	\$10,000
1943—January..	15,5901	1,665	869	773	54	1,678	4,107	4,183	3,928	1,047	1,962	293	592	10
February..	16,088	12,065	877	786	56	1,718	4,279	4,349	4,026	1,079	2,013	298	599	11
March....	16,250	12,121	890	791	56	1,713	4,280	4,391	4,129	1,104	2,069	306	616	11
April.....	16,660	12,428	904	804	58	1,741	4,391	4,531	4,232	1,131	2,128	312	621	15
May.....	17,114	12,789	914	824	59	1,785	4,526	4,681	4,326	1,159	2,186	319	630	10
June.....	17,421	12,960	929	834	61	1,793	4,565	4,778	4,462	1,195	2,259	329	648	10
July.....	17,955	13,334	943	843	62	1,836	4,719	4,931	4,622	1,237	2,347	341	667	10
August....	18,529	13,715	960	858	64	1,878	4,853	5,102	4,816	1,293	2,453	353	687	9
September	18,844	13,891	970	866	64	1,887	4,893	5,211	4,951	1,327	2,535	360	698	11
October...	19,250	14,135	987	872	65	1,902	4,962	5,347	5,118	1,366	2,636	373	713	11
November	19,918	14,598	1,006	886	68	1,950	5,127	5,561	5,323	1,416	2,761	388	729	10
December	20,449	14,870	1,019	909	70	1,973	5,194	5,705	5,580	1,481	2,912	407	749	9

lation, and large sums were needed to pay the armed forces. The bulk of the increase occurred in smaller denomination currency, although the number of \$100 bills outstanding rose by almost 50 per cent. Black market operations were reported to be a contributing factor to the extraordinary expansion of the volume of cash in circulation.

One of the surprises of the year was the revelation of the ownership of bank deposits shown by a study released by the Federal Reserve Board in October. On the basis of an analysis of the ownership of the deposits in a selected group of banks, the Board estimated that almost 70 per cent of all non-Government deposits were owned by domestic business and financial concerns, and that only a little more than 25 per cent were owned by individuals, including farmers. Nonprofit organizations, such as churches and clubs, owned 2½ per cent of all demand deposits, and foreign businesses and individuals 2.2 per cent. This analysis indicated that the great bulk of the wartime increase in bank deposits was accounted for by corporation deposits, and that individual liquid savings consisted primarily of cash.

The increase in coin and currency outstanding from month to month during 1943 is shown by Table 5.

Credit Control Policy. The Federal Reserve Banks' chief function during the year was to provide mem-

ber banks with the additional reserves required to support the larger volume of bank deposits and to offset the heavy withdrawals of cash from the banks. This was done chiefly through the purchase of Treasury bills from member banks. The bulk of the Treasury bills acquired by the Federal Reserve banks during 1943 were purchased from mem-

ber banks who retained an option to repurchase them, whenever their reserve position would permit it. This policy permits member banks to obtain reserve balances at a cost of ½ of 1 per cent per annum. It also protects the Government bond market from liquidation by banks, as the latter can obtain any added reserves they require by sale of Treasury bills to the Reserve banks, instead of resorting to liquidation of their Government securities in the open market.

In the two war years 1942 and 1943, the expansion of currency circulation exceeded \$8,000,000,000. Some \$2,000,000,000 of added reserves were required against additional deposits. To meet these greatly increased reserve requirements, member banks obtained some \$8,000,000,000 of new reserves from purchases of Government securities by the Federal Reserve banks, and excess reserves declined by over \$2,000,000,000 during 1942 and 1943. The decline in reserves was particularly severe in large city banks. Nevertheless, no real stringency resulted in the money market because any one bank could get the additional reserves needed by selling some Treasury bills to the Federal Reserve banks, as described above.

One measure of further relief for banks whose reserve position had become tight was the action of Congress eliminating legal reserve requirements on Government war loan deposits in banks, taken in April. As a result, member banks no longer re-

TABLE 6—PRINCIPAL ASSETS AND LIABILITIES OF THE FEDERAL RESERVE BANKS
[In millions of dollars]

1943 End of Month	Gold certificates on hand and due from U.S. Treasury	Bills discounted	Government bonds	Treasury bills	Federal reserve notes	Member bank deposits	U.S. Treasury deposits
January.....	20,488	14	2,637	689	12,265	13,630	4
February....	20,439	16	2,367	1,475	12,627	13,067	131
March.....	20,371	13	1,984	2,087	12,758	12,759	55
April.....	20,258	13	2,017	2,430	13,128	12,204	557
May.....	20,209	31	1,708	2,442	13,539	12,031	62
June.....	20,171	5	1,468	3,815	13,872	12,085	455
July.....	20,108	16	1,445	4,896	14,364	12,590	345
August.....	19,970	59	1,473	5,701	14,921	12,855	249
September..	19,880	12	1,500	5,350	15,266	11,864	706
October.....	19,832	26	1,506	5,547	15,663	12,086	400
November...	19,756	52	1,508	6,163	16,312	12,401	394
December...	19,615	101	1,625	6,906	16,875	12,769	764

quired additional reserves during the period of the war loans drives, when sharp increases occurred in Government war loan deposits as proceeds of the sale of the new securities were left with the banks.

The Federal Reserve authorities urged the banks to maintain a fully invested position, and not try to maintain excess reserves. Banks in New York and

Chicago generally followed this policy, but country banks generally preferred to maintain some excess reserves.

The Federal Reserve banks also assumed responsibility for stabilizing Government bond prices, through purchases and sales of various issues when such action was indicated to maintain the interest rate pattern that the Treasury has favored since war began. Under this pattern, interest rates for various maturities of Government securities follow a curve, one anchor of which is the $\frac{3}{8}$ of 1 per cent Treasury bill rate, and the other anchor the $2\frac{1}{2}$ per cent interest rate on the longest maturities of marketable securities. New offerings, as well as Federal Reserve policy, are adjusted to keep yields on Treasury obligations at these levels.

Changes in the principal items of the combined statement of the 12 Federal Reserve banks from month to month during the year are shown in Table 6.

World Developments. Currency and bank deposit inflation proceeded apace in all belligerent coun-

tries, and to a lesser extent in neutral nations, during 1943. This may be seen from the rise in currency outstanding shown in Table 7.

100 per cent in its gold and foreign exchange holdings, and sizeable increases were shown in gold holdings of virtually every other Latin American Central bank. Sales of the yellow metal to these institutions explain why the United States reported a decline of some \$700,000,000 in its monetary gold stock in 1943.

With foreign exchange rates fixed by official regulation, only a few currencies were left free to fluctuate even within narrow limits. These included the free Canadian dollar, the special export Argentine peso, and the free Brazilian cruzeiro. Fluctuations in these three currencies during 1943 are shown in Table 8.

In all belligerent countries, central banks pursued policies similar to those of the Federal Reserve Banks in that they sought to facilitate Government deficit financing without any consequent hardening of interest rates. The British Chancellor of the Exchequer told Parliament that low interest rates were not only a wartime objective of central bank policy, but that it would be the primary aim also

of postwar policy with a view to promoting economic reconstruction and development.

See EXPORT-IMPORT BANK; FEDERAL BUREAU OF INVESTIGATION; NATIONAL HOUSING AGENCY; PUBLIC FINANCE; RECONSTRUCTION FINANCE CORPORATION.

JULES I. BOGEN.

BAPTISTS. A religious group, probably evolved from the Anabaptist movement of the 16th century, which adopted the principle that immersion is essential to valid baptism. The first Baptist churches were established in Amsterdam in 1608, in London in 1611, and in America, probably at Providence, R.I., in 1639. There are 21 denominations in the United States which use the name *Baptist*, the largest of which are treated below.

Northern Baptist Convention. This body of the Baptist denomination was composed in 1943 of 36 conventions in 33 States, the District of Columbia, and Puerto Rico.

Owing to the war emergency, the 1943 annual meeting, scheduled to be held in Denver, Colo., was cancelled. Officers elected in 1942 remain in office, with Rev. Joseph C. Robbins as president.

The leading denominational papers are: *Baptist Observer* (Indianapolis); *Baptist Record* (Pella, Ia.); *Missions* (New York); and *Watchman-Examiner* (New York).

The foreign mission field includes Assam, Burma, South India, Bengal-Orissa, South China, East China, West China, Japan, Belgian Congo, and the Philippine Islands. The work of the Convention covers domestic, city, and foreign missions; higher education, social service, Sunday schools, and pensions for clergy.

The total membership of the Northern Baptist Convention for 1942-43 was 1,556,112, distributed among 7,367 churches, mostly above the Mason and Dixon Line. The total amount of funds received and expended by the churches and their agencies, as of Apr. 30, 1943, was \$17,198,480 for church operating expenses and \$4,451,057 for missions, education, and philanthropy.

Headquarters of the General Council, the executive body to which is entrusted the work of the

TABLE 7—CENTRAL BANK NOTE CIRCULATION

Country	Date	Note Circulation	Outstanding at end of 1942
Great Britain.....	Oct. 27, '43	£998,500,000	£923,400,000
Canada.....	Oct. 30, '43	\$836,000,000	\$693,600,000
France.....	July 29, '43	440,291,000,000 francs	382,774,000,000 francs
Germany.....	Sept. 30, '43	30,099,000,000 reichsmarks	24,375,000,000 reichsmarks

tries, and to a lesser extent in neutral nations, during 1943. This may be seen from the rise in currency outstanding shown in Table 7.

With the favorable course of the war, more interest was shown among the United Nations in planning for monetary and banking reconstruction. Holland and Belgium effected a monetary agreement under which each country would allow the other to build up a debit balance up to a specified amount through ordinary commercial and financial transactions, after which discussions would be carried on to work out steps to bring trade into equilibrium. Plans for a simultaneous stabilization of all currencies were formulated by the American, British, and Canadian governments. The United States also advanced a project for a United Nations Bank for Reconstruction and Development.

For the period of the war, normal foreign exchange dealings have been generally suspended.

TABLE 8—FOREIGN EXCHANGE RATES, 1943
(Average of noon buying rates for cable transfers in New York.
In cents per unit of foreign currency)

	Canada (dollar free)	Argentina (peso, export)	Brazil (cruzeiro free)	Mexico (peso)
Jan.....	89.640	23.704	5.1316	20.573
Feb.....	90.037	23.704	5.1292	20.573
March.....	89.923	23.704	5.1275	20.573
April.....	90.199	24.332	5.1275	20.574
May.....	90.137	25.188	5.1276	20.580
June.....	90.099	25.188	5.1275	20.580
July.....	90.585	25.188	5.1275	20.577
Aug.....	90.638	25.188	5.1275	20.575
Sept.....	90.150	25.147	5.1275	20.578
Oct.....	89.426	25.125	5.1275	20.580
Nov.....	89.422	25.125	5.1275	20.580
Dec.....	89.404	25.125	5.1275	20.582

Through lend-lease (q.v.), the United States is able to maintain a very large excess of exports over imports without causing any strain on other currencies. In fact, apart from lend-lease the United States had a substantial import surplus, chiefly with Latin America. This has enabled Latin American central banks and the central banks of neutral European countries to increase their gold holdings substantially. The Central bank of the Argentine Republic, for example, reported an increase of over

Convention between annual meetings, are at 152 Madison Avenue, New York, N.Y.

Southern Baptist Convention. This body of the Baptist denomination was formed in 1854, when Southern Baptists withdrew from the national organization. According to the official statistics for 1942, the Southern Baptist Convention comprised 19 State conventions; 25,737 local congregations, and 5,367,129 church members.

The annual session, scheduled to be held at Memphis, Tenn., May 12-15, 1943, was deferred in response to an appeal from the Office of Defense Transportation, Washington, D.C. All the agencies and institutions of the Convention, however, presented their annual reports and went on with their work, until such a time as the Convention could meet in regular session again. Their reports have been gathered up and published as the 1943 Annual of the Convention.

The officers elected for 1942 were continued in 1943, with The Hon. Pat M. Neff, LL.D., of Waco, Texas, as President. The 1944 Convention will meet in Atlanta, Ga., May 16-20.

The statistical summary shows a year of very great progress, as follows:

	1941	1942
Associations.....	915	918
Churches.....	25,603	25,737
Ordained ministers.....	22,747	21,986
Baptisms in year.....	209,593	209,127
Church members.....	5,238,132	5,367,129
Sunday Schools.....	24,629	24,745
Sunday School Enrollment.....	3,553,467	3,430,929
B.T.U. Organizations.....	54,957	50,726
B.T.U. Enrollment.....	954,179	801,567
W.M.U. organizations.....	41,719	40,472
W.M.U. contributions.....	\$3,286,252	\$3,791,755
Church houses.....	23,648	23,868
Pastors' homes.....	4,349	4,519
Value Church property.....	\$232,944,315	\$240,131,184
Gifts, local work.....	37,035,267	42,565,890
Gifts, missions, etc.....	7,822,340	9,681,772
Total contributions.....	\$44,857,607	\$52,247,662

National Baptist Convention of America. The 63rd Annual Session was held in San Antonio, Texas, Sept. 8-12, 1943. Every Board in the Convention submitted in printed form its annual report of the work done during the interim. The report by the statistician showed a growth of 102,000, bringing the total membership up to 2,176,521. Morris College in South Carolina was adopted as one of the educational institutions, thus increasing the number to five.

Religious intolerance was denounced; mob violence and lynching were condemned; the Four Freedoms, as announced by the President, were commended as a long step in the right direction. An appeal for the return of prohibition was renewed. A request for equal opportunities and advantages for all was urged, along with the enforcement to the letter of the Atlantic Charter in post-war planning.

The following officers were elected: Rev. G. L. Prince, President; Rev. C. P. Madison, Secretary; Rev. A. A. Lucas, Treasurer; Rev. A. L. Roach, Field Secretary; Rev. W. M. Grumble, Corresponding Secretary.

The 64th Annual Session will be held with the First Baptist Church, Beale Avenue, Memphis, Tenn., Wednesday before the second Sunday in September, 1944. The National Baptist Publishing Board, Henry A. Boyd, Secretary, 523-2nd Avenue North, Nashville, Tenn., is regarded as headquarters.

BARBADOS. An island colony of the British West Indies. Area, 166 square miles. Population (Jan. 1, 1942), 197,156. There were 5,786 births and 3,-

902 deaths in 1941. Capital, Bridgetown, 50,000 inhabitants. Education (1941): 138 schools and 30,166 students.

Production and Trade. The chief products are sugar (133,300 tons, 1943), molasses, and rum. Other products are cotton, aloes, tamarinds, and whale oil. In the fishing industry, approximately 300 boats and 1,600 are employed. Trade (1941): imports £2,299,564; exports £1,885,353. Canada supplied 39.7 per cent of the imports and received 63.2 per cent of the exports. Air services are operated by Royal Dutch Air Lines and British West Indian Airways. Roads (1940): 538 miles.

Government. Financial estimates: (1943-44) revenue £769,432; expenditure £772,370. (1942-43) revenue £660,111; expenditure £657,788. Actual (1941-42): revenue £716,974; expenditure £660,982; public debt £449,170. The executive part of the Government includes the Executive Council (the Governor and 4 other members) and the Executive Committee (the members of the Executive Council, a member of the Legislative Council, and 4 members of the House of Assembly). The Legislature comprises the Governor, the Legislative Council (9 members appointed by the King), and the House of Assembly (24 members elected every two years by the people). Governor and Commander in Chief, Sir H. Gratton Bushe (appointed October, 1941).

BARBUDA. See LEEWARD ISLANDS.

BARLEY. The barley production of the United States in 1943 was estimated by the U.S. Department of Agriculture at 322,187,000 bu. This represents a drop of 25 per cent from the record crop of 1942, but is still nearly a third larger than the 10-year average of 1932-41. The acreage harvested in 1943 was 14,702,000 acres, compared with the record yield of 16,782,000 for the previous year, but held to a 32 per cent increase over the 10-year average.

State	Value	Acres Harvested	Production (bushels)
N.D.....	\$59,829,000	2,652,000	63,648,000
Calif.....	40,009,000	1,299,000	36,372,000
S.D.....	34,990,000	2,142,000	35,343,000
Neb.....	26,801,000	1,551,000	27,918,000
Minn.....	22,718,000	1,228,000	22,718,000
Colo.....	16,911,000	734,000	17,616,000
Kan.....	14,763,000	1,110,000	15,540,000
Mont.....	13,889,000	506,000	15,939,000
Idaho.....	11,953,000	374,000	12,716,000
Wash.....	11,232,000	300,000	11,700,000
Wis.....	10,646,000	347,000	9,022,000
Ore.....	9,216,000	250,000	9,125,000
Utah.....	7,239,000	151,000	7,097,000

The average yield per acre, 21.9, dipped below the 1942 yield of 25.5, but compared favorably with the 10-year average of 21.4. In general, the growing season was poorer in 1943 than in 1942 but better than the average. The seasonal average price per bushel received by farmers was estimated at 99.1¢ and the value of production at \$319,216,000.

BARUCH RECOMMENDATIONS. See UNITED STATES under *Manpower* and *Production*.

BASEBALL. The biggest story of the year in baseball did not break until late in November, long after the New York Yankees had won the world series and just about the time major and minor league officials were getting ready to convene in New York and lay plans for 1944.

On November 23, Kenesaw Mountain Landis, baseball's high commissioner, announced that he had barred William D. Cox, youthful president of the National League Phillies, from baseball for

life for gambling on games in which his club was involved. In the most drastic action of his 22-year regime Judge Landis ruled that Cox was permanently ineligible to hold any baseball post, either in the major or minor leagues.

Cox had grabbed the sports headlines earlier in the year when he unexpectedly ousted Bucky Harris as manager of the rejuvenated Phillies and hired the popular Freddy Fitzsimmons as pilot.

After the removal of Cox by Judge Landis, directors of the Phillies elected 28-year-old Robert R. M. Carpenter, Jr., as president, Cox's stock in the club being bought by Carpenter's father. Fitzsimmons was promptly signed again as bench manager of the team.

When baseball's second wartime campaign opened last Spring many of the most rabid fans were wagering that the majors would be unable to complete a full season. Hundreds of players had been called to the colors and several minor league groups had been forced to suspend operations. But baseball carried through to a remarkably good season and made great contributions to the war effort, the Yankees, New York Giants, and Brooklyn Dodgers alone being credited with the sale of more than a billion dollars worth of war bonds. The sport's contributions to charities including the Bat and Ball Fund for service men, went well over \$2,000,000 and major league clubs collected more than 1,000,000 pounds of scrap metal, 23,000 pounds of rubber, and 12,000 pounds of waste fat, giving away thousands of free tickets for the donations. With service men, and on certain days blood donors, admitted free, the majors had nearly 700,000 free admissions during the season. The teams also played 115 exhibitions in service centers.

Crowds dropped below par in both leagues, although substantial gains were recorded in Washington, Pittsburgh, and Philadelphia, the Phillies more than doubling their 1942 figures. In all, the National circuit attracted 3,800,000 paid admissions and the American 3,300,000.

Although neither pennant race was mathematically decided until well into September it was almost a foregone conclusion as early as August that the Yankees and St. Louis Cardinals would battle it out for world supremacy in October. The Yanks won their flag by a margin of 13½ games to give Manager Joe McCarthy his eighth victory in the junior circuit and the Cards finished 18 games in front of Cincinnati.

St. Louis, after sweeping over the Yanks in the previous world series, was expected to make a real battle of their 1943 meeting, but New York turned the tables and won by 4 games to 1, Spud Chandler winning the first and fifth contests. The tireless veteran Bill Dickey hit a two-run homer to decide the finale, 2-0, after Mort Cooper, the Cards' big ace, had fanned the first five men to face him. The second battle provided the dramatic highlight of the series. Mort Cooper—the pitcher many said could never beat an American League team—and his brother Walker comprised the battery for St. Louis a few hours after learning of their father's death, and turned back the powerful Yanks for the Cards' only triumph.

With the series cut to one trip by Judge Landis, the first three games were played in New York and the five contests grossed \$1,105,784, with \$208,373 going to war relief.

The American League also won the annual All-Star contest played the night of July 13 in Philadelphia. Big Mort Cooper again was the losing pitcher, bowing by 5-3 after serving a 3-run homer

ball to Bobby Doerr of the Red Sox in the second inning.

Stan Musial of the Cards, although his stick work was disappointing in the series, was selected for the National League's most valuable player award. The fleet Redbird led the majors in batting with a mark of .357. Chandler was named most valuable in the American, Spud finishing the regular pennant drive with a pitching record of 20 victories and four defeats and an earned run average of 1.67, lowest recorded by a major leaguer in many years. Luke Appling of the Chicago White Sox, paced the junior loop in hitting with .328 and Rudy York of Detroit hit 34 homers to lead both circuits in long-range firing. Bill Nicholson of the Chicago Cubs was first in homers in the National League, driving 29. Nicholson also topped the majors in runs batted in with 128 and York led his league with 118.

Toronto won the International League pennant, but Syracuse triumphed in the Governor's Cup series, while Milwaukee was victor in the American Association. Columbus captured the little world series, Los Angeles finished on top in the Pacific Coast League and Nashville captured the Southern Association flag.

THOMAS V. HANEY.

BASIC ENGLISH. See EDUCATION.

BASKETBALL. The court game, despite the handicaps of restricted travel and player losses, rolled on to a new high in popularity in the 1942-43 campaign. New York's Madison Square Garden was the basketball center of the nation, the big Eighth Avenue arena attracting the record number of 512,526 persons to see its program of 18 college double-headers, post-season tourneys, and high school contests.

Both the National Invitation and National Collegiate Athletic Association tournaments were held on the Garden court, St. John's University of Brooklyn winning the invitation play by routing Toledo, 48-27, in the final round, while Wyoming captured the N.C.A.A. crown with a 46-34 triumph over Georgetown. The winners were then matched in a benefit game that netted \$28,000 for the Red Cross and Wyoming took undisputed claim to national collegiate laurels by beating St. John's, 52-47, in an overtime thriller before 18,316 fans. The remarkable Ken Sailors and his Wyoming Cowboys proved just a little too much for St. John's high-scoring giant, Harry Boykoff, the speedy Fuzzy Levane and Co.

Throughout the East, basketball produced keen competition and drew good crowds. Attendance at the Garden, where most of New York's big contests take place, showed a gain at the gate for the ninth successive year.

Dartmouth captured the Eastern Intercollegiate League title for the sixth straight season, Illinois retained the Western Conference championship, and Washington succeeded Stanford as Pacific Coast ruler. Other college champions were Kansas, Big Six; Creighton, Missouri Valley; George Washington, Southern Conference; Tennessee, Southeastern, and Texas and Rice, co-winners in the Southwest circuit.

The Davenport A.I.C. of Iowa repeated in the women's national A.A.U. tournament and the Phillips 66 Oilers of Bartlesville, Okla., took the men's title. The Columbus Council Knights of Columbus of Brooklyn were first in the Eastern Amateur Athletic Club League and the Philadelphia Sphas came through on top in the American Professional

League. James Madison High won New York City P.S.A.L. honors and La Salle Academy was best in the C.H.S.A.A.

THOMAS V. HANEY.

BAUXITE. See ALUMINUM.

BAVARIA. See GERMANY under *Area and Population*.

BAZOOKA. See MILITARY PROGRESS; also, BOMBS.

BEE CULTURE. See INSECT PESTS.

BETTER. See INSECT PESTS.

BELGIAN CONGO. A Belgian colony in west central Africa. Area, 902,082 square miles. Native population (Jan. 1, 1942), 10,363,909 (mainly of Bantu and Sudanese origin); white population (Jan. 1, 1943), 33,226 (22,915 Belgians, 2,200 Portuguese, 1,200 Italians, and 1,200 British). Chief towns: Leopoldville (capital), 36,641 inhabitants in 1940; Elisabethville, the principal mining center, 18,023; Matadi, the chief port; Stanleyville, Jadotville, Coquilhatville, and Boma. Fetishism is the dominant religion of the natives. Christian mission work has been actively carried on. On Jan. 1, 1941, there were 525 mission centers and 3,862 missionaries. Education (1941): 5,285 schools and 265,170 students enrolled.

Production. The chief agricultural products are coffee, sugar, cottonseed, groundnuts, palm oil and kernels, and cotton. Other crops were rubber, bananas, corn, cacao, rice, and tobacco. Mineral output (1942): copper 168,000 tons, zinc concentrates 28,000 tons, cassiterite (tin) 28,000 tons, manganese 27,000 tons, diamonds 5,500,000 carats, cobalt 1,800 tons, wolframite 269 tons, tantalum-columbite 126 tons, refined gold 16 tons. Iron, lead, coal, silver, cadmium, salt, uranium, and radium were other mineral products. The annual output of copal amounts to 17,000 tons.

Foreign Trade. In 1941 imports were valued at 1,477,728,141 francs and exports at 3,256,613,428 francs. On Jan. 21, 1941, the established exchange rate was: £1 sterling equals 176.625 Congolese francs. The main import items were machinery, textiles, metals and metal manufacture, vehicles, and coal. Products forming the chief exports were copper, gold, cotton, precious stones, palm oil, palm nuts, coffee, and copal.

Transportation. The Congo and its tributaries provide 8,000 miles of navigable waterways. Matadi, Boma and Banana are the principal seaports. Of more than 20 river ports, the chief ones are Leopoldville, Stanleyville, and Luebo. Highways extend 50,000 miles; railway lines, 3,500 miles; interior air lines, over 2,000 miles. A Pan American Airways service links Leopoldville with New York via Natal, Brazil.

Finance. Estimates (1942): revenue and expenditure balanced at 1,123,892,000 francs. In 1941 revenue amounted to 920,563,800 francs and expenditure to 806,714,574 francs. Public debt (Jan. 1, 1940), totaled 5,841,941,679 francs. Official exchange rate in 1942: one Congolese franc equalled \$0.0226.

Government. The administration is under the control of the Belgian Minister for the Colonies, aided by a colonial council of which he is the president. The Belgian Government-in-exile in London is represented in the colony by a governor general (aided by a vice governor general, state inspectors, and six provincial commissioners). Governor General, Pierre Ryckmans (appointed September, 1934).

Ruanda-Urundi, Territory of. Two districts mandated to Belgium by the League of Nations. Area,

20,152 square miles; population (Jan. 1, 1940), 3,775,335, all natives except for 1,404 Europeans. Capital, Usumbura. Cattle raising is an important industry. The chief products are maize, cotton, potatoes, groundnuts, tin, and gold. The territory was united (Aug. 21, 1925), for administrative purposes, with the Belgian Congo and placed under the direction of a vice governor.

History. In order to increase the Belgian Congo's output of tin a large percentage of the European staffs and native workers of the gold mines were transferred to the tin mines. Other native workers had to be recruited and some 25,000 native workers began work in new mines. New plantations were placed in production to provide food for the native workers and their families in the new tin-mining area. It was reported during May, 1943, that a large detachment of Belgian colonial troops had arrived in the Middle East to serve with the Allies. See BELGIUM under *History*; CHEMISTRY under *Foreign*; TIN.

BELGIUM. A kingdom of Western Europe, occupied by German military forces in May, 1940. Capital, Brussels. King, Leopold III, who was crowned Feb. 23, 1934; he became a German prisoner-of-war May 27, 1940.

Area and Population. The districts of Eupen, Malmédy, and Moresnet, ceded to Belgium under the Versailles Treaty, were reannexed to Germany on May 19, 1940, leaving Belgium with an area of 11,393 square miles and an estimated population of 8,294,674 on Dec. 31, 1940 (8,386,553 on Dec. 31, 1938). The official estimate for Jan. 1, 1942, was 8,257,392. The people are of two distinct races, the Flemings, of Germanic stock and the Walloons, of Celtic or Alpine racial origin. French and Flemish are official languages. Estimated populations of the chief cities on Dec. 31, 1938: Brussels and suburbs, 912,774; Antwerp, 273,317; Ghent, 162,858; Liège, 162,229. Living births per 1,000 inhabitants numbered 15.3 in 1939, 13.4 in 1940, 12.0 in 1941, and 12.9 in 1942; deaths, 13.8 in 1939, 16.1 in 1940, 14.5 in 1941, and 14.6 in 1942 (including military casualties). According to the German-controlled press, there were 9,617 living births and 11,432 deaths in the month of January, 1943. The infant mortality rate per 1,000 live births was 73 in 1939, 85 in 1940, 84 in 1941, and 78 in 1942.

Education and Religion. Previous to the war there were (Jan. 1, 1939) 1,222,164 pupils in 13,438 elementary schools, 86,279 students in 273 secondary schools, and 10,775 students in the four universities at Brussels, Louvain, Ghent, and Liège. The German occupation brought education under Nazi control. Many schools, including the University of Brussels, were closed and attendance in others declined. A considerable majority of Belgians professing a religious faith are Roman Catholics.

Production. Previous to the war Belgium's manufacturing, mining, intensive agriculture, and extensive foreign commerce enabled it to support one of the densest populations of Europe (712 per square mile on Dec. 31, 1938). The British blockade and the conversion of Belgium's productive facilities for German war purposes beginning in 1940 reduced the population virtually to the subsistence level (see below under *History*). The area under cultivation was substantially expanded in 1941 and 1942 and a substantial increase in cereal production was reported. Potatoes, beets, and tobacco are other leading crops. Beet sugar production in 1940-41 was estimated at 231,000

metric tons (237,300 in 1939-40). As of Jan. 1, 1940, there were 245,549 horses, 1,599,837 cattle, and 855,928 swine. Many of these were slaughtered during the ensuing years. Mineral and metallurgical production in 1940 was (metric tons): Coal, 25,605,000; pig iron and ferro-alloys, 1,791,000; steel ingots and castings, 1,896,000. The output of briquets in 1939 was 1,525,190 metric tons; coke, 5,176,650; wrought steel (except semi-finished), 2,202,420. Belgium was an important pre-war producer of glass, paper, cardboard, cement, cotton yarn, rayon, metal products, alcoholic beverages, furniture, etc.

Foreign Trade. Following the German conquest, Belgium's trade was restricted largely to Axis countries and areas under their control. All trade payments were cleared in reichsmarks through the German Clearing Office in Berlin. In 1941 Germany supplied 66 per cent of the imports and received 72 per cent of the exports; the Netherlands, 12 and 13 per cent, respectively; France, 11 and 10 per cent, respectively. According to the German-language newspaper *Brüsseler Zeitung*, Germany took 72 per cent of Belgium's 1942 exports, France 16 per cent, the Netherlands 6 per cent, and other European countries 6 per cent. The actual trade figures were not published.

Finance. Actual receipts of the German-controlled administration were reported at 8,992,000,000 francs in 1940 and 12,376,000,000 francs in 1941, as against expenditures of 21,400,000,000 francs in 1940 (including occupation costs of 4,500,000,000) and 36,600,000,000 francs in 1941 (occupation costs, 16,300,000,000). Estimated receipts for 1942 were 14,607,000,000 francs and estimated expenditures (excluding occupation costs) 17,425,000,000 francs.

Public debt (in millions of francs): 98,202 on March 31, 1943 (consolidated, 57,623; floating, 40,579), as compared with 71,904 on Dec. 31, 1941, and 40,318 on Dec. 31, 1939. The belga, equal to five francs, is the unit of currency for foreign transactions. The Germans in 1940 fixed the official exchange rate of the reichsmark at 2.50 belgas instead of the pre-war rate of 1.67 belgas, thus overvaluing the reichsmark by 50 per cent.

Transportation. Previous to the German invasion, Belgium had 7,068 miles of railway line, 20,244 miles of highways, an extensive network of rivers and canals which carried about one-fourth of the total merchandise traffic, 8,313 miles of air routes in Europe and Africa (August, 1939), and a merchant fleet of 88 ships totaling 353,997 gross tons. Internal communications were badly damaged by the 18-day German *blitzkrieg* of May 10-28, 1940, but most of this damage was said to have been repaired by the end of 1941. Including smaller boats not included in the merchant fleet described above, about 350,000 tons of shipping escaped from Belgium to Great Britain at the time of the German invasion. These ships, with their Belgian crews, entered the service of the United Nations. Over half of this tonnage was reported to have been lost through enemy action.

Government. The Constitution of 1831, as amended in 1921, vested executive power in the King, acting through a Ministry responsible to Parliament. See YEAR BOOK for 1940, p. 63, for the governmental system existing at the time of the German invasion of May 10, 1940. When the Belgian army capitulated at the order of King Leopold on May 27, 1940, the Belgian Government in Paris repudiated the King's action and assumed the right, granted by the Constitution, to exercise the King's powers while he remained a prisoner of war. The

Belgian Government-in-Exile was transferred to London from Vichy, France, in October, 1940. For its war declarations, see table under WORLD WAR.

The composition of the Government at the beginning of 1943 was: Premier, Minister of Defense, Hubert Pierlot; Foreign Affairs, Communications, Labor, Paul-Henri Spaak; Finance, Economic Affairs, Camille Gutt; Colonies, Education, Albert De Vleeschauwer; Justice, Information, Antoine Delfosse; Ministers without Portfolio, August Edmond de Schryver and August Balthazar. On May 20, 1940, Gen. Baron Alexander von Falkenhausen was named German military administrator of Belgium and northern France. German military governors replaced the Belgian provincial governors, but the central administrative functions in Brussels were retained temporarily by the permanent chiefs of the Belgian governmental departments. For developments in 1943, see *History*.

HISTORY

German Rule. May 10, 1943, was the fourth anniversary of the German invasion of Belgium. What happened to the Belgian people during those four years was described by the Belgian Information Center in New York (*News from Belgium*, May 15, 1943, p. 153-4) as follows:

Seven per cent of the Belgian population has been killed, been taken prisoner of war, rots in concentration camps or has been deported to Germany as forced labor. Out of the 8,350,000 inhabitants . . . nearly 600,000 have suffered or are suffering a terrible fate at the hands of the Germans. During the battle of Belgium, in May, 1940, nearly 7,000 Belgian soldiers and some 10,000 civilians were killed, while out of the soldiers taken as prisoners of war, 75,000 are still in German camps. From the time of occupation up until March of this year, 3,000 Belgian civilians have been executed by the Nazis, 7,500 are in German prisons, and 480,000 have been deported. Several more thousands—the exact number is not known—are in prisons or concentration camps in Belgium. Most of the 3,000 civilians who have been shot were hostages. This number is ten times greater than that of the Belgian civilians who were killed in the 1914-1918 occupation. . . .

German rule became steadily more oppressive during 1943 as Germany's military and economic difficulties increased and as the Belgian people resorted to more and more violent and widespread resistance. The Belgian weekly newspaper *La Belgique Indépendante*, published in London, reported in September that Allied victories in Russia, Africa, and Sicily had caused a sharpening of the German reign of terror. The number of Belgians deported for forced labor in Germany had risen to more than 500,000. "Every month," the report continued, "the Nazis arrest three or four thousand patriots and take two or three hundred hostages, about 100 of whom are shot. . . . There are few families that have not lost a father or a son, deported or imprisoned. Thousands of students, workmen, and middle-class people are hiding out, preferring to face the cruelest privations rather than work for Germany."

As the manpower shortage in the Reich became more serious, the German authorities in Belgium speeded the process of mass labor conscription authorized by the decree of Oct. 9, 1942 (see 1943 YEAR BOOK, p. 69). A decree of Mar. 6, 1943, required male and female university students to "volunteer" for six months of labor service before March 20 on pain of being deprived of their ration cards. In April the Germans ordered the conscription of all farmers and farm workers born in 1922, 1923, and 1924 for work in the Reich. The number of deportations for forced labor was estimated in September at between 3,000 and 4,000 monthly. Many others were rounded up for work on fortifications or in German war industries in Belgium. Of Belgium's 52,000 Jews, nearly all had been sent

to concentration camps in Germany, Poland, and occupied Russia, according to a statement by the Belgian Government in Exile on June 14.

The economic looting of the kingdom, described in previous YEAR BOOKS, continued at an accelerated pace. It was reported in April that in the Liège area, once the biggest industrial region of Belgium, all except two or three factories had been ordered closed and the usable machinery shipped to Germany. According to a statement broadcast from London by the Belgian Minister of Justice on Mar. 12, 1943, Germany had accumulated a debt of over 25 billion francs "for compulsory exports extorted from Belgium," which the Germans never expected to pay. "At the same time," he continued, "by round-about means, working more often than not through German private firms, she has gained possession of the controlling shares of numerous mining, metallurgical and textile undertakings, insurance companies, department stores, and the like. Finally, she openly confiscated the so-called enemy property of Jews and non-Jewish Belgians who had left the country."

The growing harshness of the German military administration was reflected in the decree of Apr. 28, 1943, issued by General von Falkenhausen. It ordered that henceforth German law be applied in Belgium wherever possible. The death sentence was made mandatory for the possession of firearms or explosives, the failure to report the known possession of arms and explosives by others, the failure of managers of factories and warehouses to prevent industrial sabotage, and the failure to report information leading anyone to believe that acts of sabotage were being planned. Death was also prescribed for anyone hiding "enemy" soldiers or airmen or failing to disclose knowledge of their presence, for inciting laborers to stop work or disturbing "labor peace," for stealing, receiving, or distributing ration coupons, and for acts of violence against collaborationists or members of their families. The decree imposed the penalty of forced labor for the following offenses: possession of Allied propaganda, membership in unauthorized political associations, and circulating statements "detrimental to the prestige of the occupying power or to the Reich or which might provoke trouble in the occupied territories."

Belgian Resistance. The harshness of the German measures of repression and the systematic ruthlessness with which they were imposed only served to intensify Belgian opposition. Sabotage of communications, industries, crops, and other economic activities of value to the German war effort became a major problem for the occupational authorities. Attacks by patriots upon German officials and soldiers and upon Belgian Rexist and Frontists collaborating with the Germans were of daily occurrence. The police chief of Brussels, several burgomasters, editors, publishers, and numerous other leading quislings paid with their lives for assisting the conqueror. So did scores of less important collaborationists.

The deportations for forced labor in Germany provoked open defiance. From his chateau at Laeken where he was held prisoner, King Leopold wrote a letter of protest to Hitler. The Fuehrer replied that the necessities of war forced Germany to continue this policy. Members of the Belgian Catholic hierarchy violently denounced the deportations in a pastoral letter read in all churches on March 21. On March 20 the Belgian Supreme Court of Appeals in a letter to the occupational authorities denounced them for "reducing the Belgian people to slavery" and committing "injustice

and wrong which . . . are in opposition, not only to the dispositions of The Hague Convention signed by Germany and Belgium, but also to the imperious demands of conscience." Deputies and Senators of the dissolved Belgian Parliament and other former officials joined in the chorus of protest.

In carrying out the deportations and in other repressive measures the Germans encountered both active and passive resistance from the Belgian courts, the police, and many of the nonpolitical civil servants who were still in office. The German radio in Brussels on March 10 announced the removal from office of Baron Albert Houtart, Governor of Brabant. He was the last to be ousted of the nine Provincial Governors regularly appointed by the King before the German invasion. The Germans in July arrested 112 policemen in the Brussels area, including several district superintendents. Twelve Brussels judges of the Belgian Grand Jury were ousted about the same time for refusing to approve German measures.

Thousands of workers in industrial and coal-mining centers went on strike against the deportations in February. The Germans broke the strikes by seizing numerous hostages and threatening to machine-gun unarmed workers. Students at Ghent University struck against the forced labor decree of March 7. There were anti-German demonstrations at both Ghent and Liège universities. The rector of Louvain University was imprisoned for refusing to turn over the student registration lists to the Germans for use in enforcing the labor decree.

Despite the constant threat of betrayal by Belgian quislings and of imprisonment, torture, deportation, or death, the resistance movement steadily gained momentum. Scores of underground newspapers were widely circulated. The anti-Nazi Front of Independence formed late in 1941 strengthened its organization and its preparations for assisting the expected Allied invasion. It united all religious and political groups in a solid anti-German front. Numerous other underground organizations, such as the White Brigade and the Communists, intensified their work of sabotage and espionage. Sabotage of the railways reached such proportions early in the year that the Germans placed Belgian hostages on military trains and created a special corps of troops to guard the lines.

Allied Air Attacks. On April 5 U.S. heavy bombers based in Britain attacked the Erla airplane works and the Gevaert war factory in the thickly populated Mortsels suburb of Antwerp. Both factories were badly damaged, but some of the bombs created havoc in adjoining residential areas. A few days later the R.A.F. bombed the General Motors and Ford factories in Antwerp, which were working on German war orders, and on May 5 U.S. bombers again attacked these works. The German authorities took great propaganda advantage of these raids, asserting that the American and British airmen had ruthlessly sacrificed the lives of large numbers of Belgians. They claimed that 2,006 civilians were killed in the U.S. raid of April 5.

The Belgian underground press later reported that only 843 death certificates were made out, and pointed out that the Germans failed to sound the air raid warning signal. The acting Mayor of Antwerp asked General von Falkenhausen to transfer the war factories to port areas separated from the residential sections of the city. Instead the Germans reportedly requisitioned two additional factories in the heart of Antwerp for war work. It was significant that no further Anglo-American raids on factories in thickly populated urban dis-

tricts were reported, even though the London radio on June 21 warned Belgians living near such plants to move from the danger zone.

Food Shortage. The British Government, with the apparent support of Washington, in March again rejected pleas from Premier Pierlot of the Belgian Government and from Anglo-American churchmen and laymen for relaxation of the blockade to permit food shipments to undernourished Belgian children. The Parliamentary Secretary to the Ministry of Economic Warfare reiterated the Government's contention that such shipments would benefit the enemy directly or indirectly. Reports of the sabotage of crops and food stores by anti-Nazi underground groups seemed to indicate their agreement with the British view. The Germans, however, were reported to have found the Allied food policy one of their most powerful propaganda weapons. The German authorities sought to check the spread of anti-Nazi activities by threatening in July to halve the already insufficient food supply. They also exploited the food shortage to force Belgians to accept work in Germany.

According to the Belgian Information Center in New York, the food shortage at the end of June was increasingly acute, with Belgium facing the early prospect of famine. "Two years and a half of semi-starvation," it stated, "has lowered physical resistance to such an extent that the future of the race is at stake."

Government-in-Exile. The Government-in-Exile in London continued preparations for its return to Belgium and for the prompt initiation of relief and rehabilitation measures as soon as the Germans were driven out. Premier Pierlot outlined the Government's plans in this respect in a broadcast to occupied Belgium on July 21, the 112th anniversary of Belgium's independence. The invading armies, he said, would be accompanied by Belgian military-civilian missions, which would distribute food supplies, establish contact with Belgian patriots, cleanse the public administration of "traitors and collaborators," and arrange for the transfer of the Government to the liberated zone as soon as it was possible to maintain order. The Premier said that King Leopold, "now a prisoner among his people," would again exercise constitutional powers; that Parliament would meet again; and that the Ministers would submit their resignations after seeking Parliament's approval of their actions since the German occupation. A new Government would then be formed, "including in it men who lived through the occupation." He promised "swift, exemplary punishment for all who have given criminal help to the enemy."

On March 18 the Government issued a decree deferring the parliamentary elections which, under the Constitution, should have taken place during 1943. The same decree extended the existing parliamentary mandates until such time as elections could be held. Premier Pierlot pointed out that a similar decree was issued in World War I during the German military occupation. Another decree of March 18 called up for military service all eligible Belgians born between Jan. 1, 1900, and Dec. 31, 1924. In May the Government completed financial arrangements with the Canadian Wheat Board for the delivery of 200,000 tons of wheat upon demand for the relief of liberated Belgium.

Alarmed by the agitation in some British and American circles for "generous" treatment of defeated Germany, Premier Pierlot and several of his Ministers made repeated demands for stern punishment of Germans and Belgian collaborationists responsible for the sufferings of the Belgian people.

The Government also continued its close cooperation with the British and American war efforts. It was disclosed April 10 by Minister of Finance Camille Gutt that the Government in March, 1941, had lent Great Britain 3,000,000 oz. of gold to pay for vitally needed war materials purchased in the United States. This loan, equivalent to some three billion Belgian francs, helped to tide Britain over a critical foreign exchange shortage until the adoption of the American lend-lease policy relieved the situation. M. Gutt stated that Britain had since repaid the Belgian loan in full. On April 29 the Belgian Government announced that a large detachment of colonial troops from the Belgian Congo had arrived in the Middle East to serve with the Allies.

In a broadcast to occupied Belgium on February 26, Foreign Minister Paul-Henri Spaak forecast closer military and economic ties between Belgium and Great Britain after the war. He said that Belgium would continue her customs union with Luxembourg and would seek closer cooperation with France and the Netherlands. As a step in this direction, the governments of Belgium, the Netherlands, and Luxembourg on October 21 signed a monetary agreement pegging the Belgian franc and Netherlands guilder at the prewar exchange rate of 1 guilder to 16.52 francs. An agreement specifying the principles and procedures for the provision of reciprocal lend-lease aid to the United States and its armed forces by the Belgian Government was concluded through an exchange of notes on January 30. It supplemented the American agreement to extend lend-lease aid to Belgium, signed June 16, 1942.

At the year's end the British and U.S. Governments were negotiating with the Government-in-Exile an agreement providing for the control of civil affairs in Belgium following the landing of Allied armies. In mid-December it was reported from Sweden that Hitler had appointed Gen. Richard Jungklaus, a trusted Nazi, to replace Lieut. Gen. Baron von Falkenhausen as German military commander in Belgium. See **BANKS AND BANKING**; **NETHERLANDS** under *History*; **WORLD WAR**.

BENEFACTIONS, BEQUESTS. See **PHILANTHROPY**.

BELL P-39. See **AERONAUTICS** under *Types*.

BENEFIT PAYMENTS. See **AGRICULTURE**; **RECONSTRUCTION FINANCE CORPORATION**; **SOCIAL SECURITY BOARD**. For **Veterans' Benefits**, see **ARMED FORCES**. **BENGAL.** See **INDIA**.

BENTONITE. Vastly increased production by steel foundries, which use bentonite as a bonding material for molding sand, has correspondingly brought this versatile clay into war prominence. As with many other minerals, labor was the limiting production factor, reserves and plant capacity being adequate.

Five producers in the Wyoming-South Dakota district account for more than 60 per cent of domestic production. Other deposits are nonswelling, therefore mostly unsuitable. Total United States production for 1942, the last year for which statistics are available, set a new record at 374,967 tons according to the Bureau of Mines. For 1941, production was 354,028 tons; for 1940, 251,032 tons. Production in 1943 approximated 1941-42 levels. A fire which destroyed the South Dakota plant of Eastern Clay Products Co., although it was quickly rebuilt, was a factor in reducing total 1943 output.

Use of bentonite in the steel industry increased from 53,872 tons in 1939 to 149,384 tons (40 per

cent of the total tonnage) in 1942. Thirty-one per cent of the total 1942 tonnage was used for filtering and decolorizing oils, 13 per cent in oil well drilling muds, and the remaining 16 per cent in a wide variety of applications including cement, concrete admixture, and filler (other than paint and paper).

Reflecting the high quality of the bentonite produced in the Wyoming-South Dakota district, in 1942 its 61 per cent of national tonnage commanded 76 per cent of the national value, which totalled \$2,548,509. For the entire United States the average value in 1942 was \$6.80 per ton which compares with \$6.93 in 1941 and \$7.65 in 1940.

CHARLES T. POST.

BERMUDA. A British colony in the Atlantic, 677 miles southeast of New York. Included in its area are some 360 islands, of which 20 are inhabited. Area, 19.3 square miles. Civil population (1940 estimate), 32,086 (12,319 white, 19,767 colored). Chief towns: Hamilton (capital), 2,978 inhabitants in 1939; St. George. Vital statistics (1941): 23.5 births per 1,000; 13.2 deaths per 1,000; 295 marriages. Education (1941): 29 aided schools and 5,182 pupils; a garrison school, a naval school, and 14 unaided primary schools. The islands contain bases for the British Navy and for the United States military and naval forces (see 1943 YEAR BOOK, p. 71).

Production and Trade. Most of the 1,400 acres of land under cultivation bear from two to three crops a year. The chief products are onions, potatoes, lily bulbs, cut flowers, and green vegetables. Arrowroot and bananas are grown. Trade (1941): imports £2,422,106; exports £125,000. In 1942 imports were valued at £2,401,225. The United States, Canada, and Great Britain supplied the bulk of the 1941 and 1942 imports. Shipping (1940): 3,128 vessels aggregating 13,304,639 tons entered and cleared the ports. Bermuda is a port of call on the New York to Lisbon transatlantic air service.

Government. Budget estimates (1942): revenue £713,580; expenditure £783,000. Public debt (1940), £75,000. Bermuda has a representative form of government and laws are enacted by a legislature consisting of the Governor (aided by an Executive Council of 4 official and 3 unofficial members), the Legislative Council (3 official and 6 nominated unofficial members), and an elected House of Assembly of 36 members. Governor, Lord Burleigh (appointed August, 1943). See BIRTH CONTROL; HURRICANES.

BERMUDA CONFERENCE. See REFUGEES; UNITED NATIONS.

BERYLLIUM. In great demand as an alloy for copper, beryllium was the object of widespread exploration and metallurgical research in 1943. Alloyed in the approximate ratio of 98 per cent copper, 2 per cent beryllium, this element hardens copper and increases its tensile properties without greatly decreasing electrical conductivity. Beryllium-copper alloys are fabricated into springs, diaphragms, low-sparking tools, and motor parts subject to wear.

The principal ore of beryllium is beryl, $\text{Be}_3\text{Al}_2(\text{SiO}_3)_6$, which is typically a pale green, blue-green, or white mineral that occurs as hexagonal crystals or crystalline masses in pegmatite dikes. Pegmatite dikes containing a few crystals of high-grade beryl occur in nearly every State of the United States, but are widely separated and limited in extent. Therefore most production results when beryl crystals encountered in the quarrying of mica

or feldspar are hand-cobbed and tossed aside to be sold after several tons of ore have accumulated.

Most domestic production is in the Black Hills of South Dakota, with some from Colorado, Maine, New Hampshire, and Wyoming. Output of United States mines was 121 short tons in 1940 and 158 tons in 1941, the last year for which figures are available because of wartime restrictions. Imports were 1,635 tons, all from Brazil and Argentina, in the first nine months of 1941, the last for which figures were released. To stimulate domestic production, Metals Reserve Co., the Federal ore-buying agency, has inaugurated a wartime purchase program, with purchase depots in ten western States. Small lots are purchased on the basis of \$120 per dry short ton for 10 per cent BeO grade ore. For lots over one ton, Metals Reserve pays a premium of \$12 per dry short ton for each 1 per cent of BeO content in excess of 10 per cent, with an equivalent penalty for ore analyzing less than 10 per cent. Minimum grade acceptable is 8 per cent BeO . These may be considered to be market prices. The theoretical content of pure beryl is 14 per cent BeO (5 per cent Be).

Beryllium-aluminum light alloys are still in the experimental stage. Pure metallic beryllium is principally used for X-ray tubes. Beryllium oxide is utilized in fluorescent lamps, luminescent paints, and special refractories. Ground raw beryl is in demand for ceramics. Transparent beryl crystals of gem quality are prized as emerald and aquamarine. Because of the limited availability of beryllium, electrolytic manganese is substituted widely in alloys. Beryllium is insufficient for war plus essential civilian demands under existing administrative controls according to the War Production Board, being rated as the fifth most critical metal.

CHARLES T. POST.

BESSARABIA. See RUMANIA under *History*.

BETATRON. See PHYSICS under *Hundred Million Volt X-Rays*.

BEVERIDGE PLAN. See GREAT BRITAIN under *History*; LABOR CONDITIONS under *Labor Movements*; POSTWAR PLANNING.

BEW. See ECONOMIC WARFARE, OFFICE OF.

"BIG INCH." See AQUEDUCTS; PETROLEUM ADMINISTRATION FOR WAR; ELECTRICAL INDUSTRIES.

BILLIARDS. In the absence of tournament play in 1943, competition in this age-old pastime was limited to a world pocket billiards challenge match, held in Kansas City, Mo. The veteran artist Andrew Ponzi of Philadelphia dethroned Willie Mosconi of Jackson, Mich., as world ruler in this type of cue play, defeating his rival by the score of 1,250 to 1,050 in their ten-block meeting. The victory brought the title to Ponzi for the third time.

No three-cushion tourney was held, so that crown remained on the aging head of the Old Master from New York, Willie Hoppe, who kept his weapons fit for future challenges by playing a number of exhibitions.

THOMAS V. HANEY.

BILLITON. See NETHERLANDS EAST INDIES under *Area*.

BIOGRAPHY. See LITERATURE; articles on foreign literatures.

BIRDS, BIRD REFUGES. See FISH AND WILDLIFE SERVICE.

BIRTH CONTROL. The Planned Parenthood Federation of America, Inc., formerly The Birth Control

Federation of America, Inc. and its 34 affiliated State leagues, made marked advances in 1943. Its objectives were not altered but were broadened. They were: to foster the acceptance of child spacing as part of the public health programs of the States; to make information on family planning, both in the spacing of pregnancies and promotion of the fertility of childless couples, available under medical direction, through hospital, public health and extra-mural clinics, as well as through doctors in private practice; to carry on a program of education and service, addressed to physicians, nurses, social workers, labor and management in war industry, industrial hygiene physicians, clergymen, Negro leaders, and the general public, explaining the aims of Planned Parenthood and its potential contribution to family health.

Richard N. Pierson, M.D., who had been President of the Federation for four years, was succeeded by J. H. J. Upham, M.D., former President of the American Medical Association, as President. C. C. Pierce, M.D., continued as Medical Director, and Eva F. Dodge, M.D., became Associate Medical Director.

In the medical field efforts were continued to interest State Departments of Health in the inclusion of pregnancy spacing in their State maternal health programs, in promoting adequate indemnity programs in industrial plants, in broadening the educational programs of affiliated State Leagues and adding professional personnel to their staffs. The District of Columbia and twelve States were visited by the Federation's staff during the year. At the end of the year, five more States had initiated the inclusion of pregnancy spacing in their public health program of maternal care, bringing the total to 11. The Federation became an associate member of the National Health Council during the year, along with other established health agencies.

Efforts to stimulate better teaching of contraceptive technique in medical schools continued. Although the American Medical Association, at Annual Meetings in 1937 and 1942, had recommended that its Council on Medical Education and Hospitals be instructed to promote in medical schools, thorough and adequate teaching of the various factors pertaining to human fertility and sterility, and although 45 per cent of the Grade A Schools were giving some instruction, the Federation's survey in 1943, indicated that much remained to be done. A teaching manual, a *Syllabus for the Theory and Teaching of Conception Control*, by W. E. Brown, M.D., of the University of Cincinnati was prepared and sent to all Grade A medical schools by the Federation. Dr. Brown visited and surveyed teaching of contraception in 26 schools. Dr. Upham, in an article in the *Journal of the Association of Medical Colleges*, stressed the need for adequate teaching of contraceptive measures in such institutions. Over 11,000 copies of Dr. Robert L. Dickinson's manual, "Techniques of Conception Control" were sent on request to general practitioners, and 19,000 copies to nurses. Training institutes for public health nurses on the indications for pregnancy spacing were conducted in Florida, Delaware, and North Carolina.

Research in the field of human fertility continued during the year. A special committee of the Council on Pharmacy and Chemistry of the American Medical Association did research work in Chemical Contraceptives and its Council on Physical Therapy initiated a cooperative program on the investigation of mechanical articles and devices. No important new discoveries were made during the year.

Birth Control centers and services totaled 786 at the close of the year: 288 extra-mural; 286 in public health quarters; 211 in hospitals, and 372 of the total supported in whole or part by public funds. Services for treatment of involuntary sterility were listed in the Federation's Clinic Directory, and those seeking such information were referred to hospitals or centers with sterility services, or to doctors in private practice.

In the field of industrial hygiene, absenteeism, due often to pregnancy or abortion, was found to be a contributing factor in the slow-down of production in plants employing numbers of women war workers. The problem was acute in many areas, and the Division of Industrial Hygiene of the U.S. Public Health Service, recommended, in an outline issued for use in industry, that counselors in plants give women workers "advice on the proper spacing of pregnancy, as a means of protecting the health of the mother and her children." The Director and Associate Medical Director of the Federation visited a number of plants and found that there was no uniform policy on employment of pregnant women, or of safeguarding their health if employed. In cooperation with the Alabama State Department of Health two pamphlets dealing with the problem were published, one addressed to workers and one to management. A radio transcription, "Freedom From Fear," dealing with the problem of absenteeism due to pregnancy, was issued by the Federation for use of its affiliated Leagues and Committees.

A new pamphlet, "The Case Worker and Family Planning," was written and sent on request to 2,000 social workers. This group and the nurses are in constant contact with families needing help in pregnancy spacing, and both are in a position to refer such cases to centers or physicians where information can be given them. The Federation's Advisory Committee on social work directed work in this field. The Federation participated, as a kindred group, in the National Conference of Social Work.

The Division of Negro Service organized an Advisory Council of 46 and a Sponsoring Committee of 146 members, representing national professional, medical, religious, educational, and civic leadership. A pamphlet, "Better Health for 13 Million," was published, reporting on the two public health projects for Negroes, one in a rural and one in an urban area, undertaken to determine whether, given the opportunity, under medical direction, Negroes would use child-spacing information effectively. Results in both areas proved that once such services were provided they would be used by the educationally and economically handicapped in the most impoverished areas.

A National Clergymen's Advisory Council of the Federation was organized and had nearly 1,000 members at the close of the year. The functions of the Council were in part: to make clear the attitude of its members on the religious values in Planned Parenthood, to emphasize to the clergy their need to inform themselves on child spacing as an integral part of their premarital and marriage counselling, and to answer attacks emanating from religious sources. A preliminary edition of a pamphlet on "Marriage Counsel" was printed.

A sample mailing to 5,000 clergy of five Protestant denominations, offering them literature on various aspects of Planned Parenthood, elicited a 20 per cent response. None of these were members of the Council, and the mailing was undertaken to test the interest of a group which had not been reached previously.

A large number of magazine and newspaper articles kept the public informed of the work of the Federation and the principles for which it stood. The output of leaflets and reprints was large. The Federation began production of a series of pamphlets on special health problems with the publication (in cooperation with the Virginia League for Planned Parenthood) of "Tuberculosis and Parenthood."

Nine affiliated State organizations, Maryland, Delaware, West Virginia, Florida, Iowa, Tennessee, Virginia, Minnesota, and Missouri, broadened their programs and strengthened their professional staffs, some adding full-time executives. Ohio became affiliated, making a total of 34 State organizations affiliated with the Federation.

The case of Dr. Wilder Tileston of Connecticut was taken to the U.S. Supreme Court for review. He had asked the Supreme Court of Errors of his State for a declaratory judgment on his legal right to prescribe contraceptives for patients whose lives or health are threatened by pregnancy. The Court's decision was that under the State law, which they pronounced Constitutional, he had no legal right to advise these patients. The U.S. Supreme Court, on February 1, ruled that, since Dr. Tileston did not assert that his life was threatened, "there is no basis on which we can say that he has a standing to secure an adjudication of his patients' Constitutional right to life, which they do not assert in their own behalf," thus dismissing the case on a technical point.

Estimates indicated that the largest number of babies in the country's history were born in 1943, refuting the claim that if people have contraceptive information fewer babies will be born. See VITAL STATISTICS. The Federation raised \$190,000 in contributions during the year.

Australia. The regulations issued by the Governor General under the National Security Act in 1942 (see 1943 YEAR BOOK) did not affect physicians in private practice nor clinical service.

Bermuda. Health Boards asked the Assembly for aggressive action on the problems of over-population and illegitimacy, stating that they were arranging for a medical lecturer on birth control to visit Bermuda.

France. The Vichy regime continued to suppress birth control and to clamor for a rise in the nation's birth rate, but there was an estimated deficit of 40,000 deaths over births.

Germany. No reliable national vital statistics were issued, but figures from various cities showed a marked drop in the birth rate. Contraceptives were manufactured and sold in spite of propaganda aimed to stimulate the birth rate.

Great Britain. Marriage and birth rates were the highest in years. Clinics remained open and active, three new ones being added to the list. Research in comparative value of chemical contraceptives was continued, clinically and in the laboratory, and work on the diagnosis and treatment of sterility was part of the service in some clinics. Lord Horder remained head of the Family Planning Association.

India. Reports on extension of clinical service and training of physicians in contraceptive technique were few during the year. The increase of almost 52,000,000 population in the last ten years was announced, together with the most disastrous famine in India's history. (See INDIA.)

Japan. Claims that Japan's high birth rate was being maintained, in spite of the war, and that 1,000,000 population was being added annually to the nation, could not be substantiated. Birth

control continued to be suppressed rigorously in Japan.

Puerto Rico. Contraceptive services continued work with the cooperation of various health agencies. The reduction of infant and maternal mortality and still-birth rates, due to better public health facilities, coupled with a continued high birth rate, created a population problem of major proportions for which no solution was being offered.

Europe. No news on birth control activity was allowed to filter through the rigid control exercised by Germany in the occupied countries. The net reproduction rates were low.

D. KENNETH ROSE.

BIRTHS, BIRTH RATES. See BIRTH CONTROL; CHILDREN'S BUREAU; PUBLIC HEALTH SERVICE; VITAL STATISTICS; major countries under *Population*.

BISMARCK SEA, Battle of the. See WORLD WAR.

BITUMINOUS COAL DIVISION. A Division of the U.S. Department of the Interior authorized under an act of 1937 to conserve bituminous-coal resources and to stabilize the industry by establishing minimum prices. It was originally limited in operation to a period of four years and subsequently extended to Aug. 24, 1943, on which date it expired. For details, see YEAR BOOK for 1941.

BLACK LIST. See ECONOMIC WARFARE, OFFICE OF; PAN AMERICANISM; the major Latin American countries and SWITZERLAND under *History*.

BLACK MARKETS. See FOOD INDUSTRY; FRANCE under *History*; HIDES and LEATHER.

BLACKOUTS. See CIVILIAN DEFENSE, OFFICE OF; STATE LEGISLATION under *War*.

BLACK POWDER. See CHEMISTRY under *Explosives*.

BLACK-STEM RUST. See INSECT PESTS.

BLACK WIDOW (P-61). See AERONAUTICS under *Types*.

BLIMPS. See NAVAL PROGRESS.

BLIND, Aid to the. See CHILDREN'S BUREAU; SOCIAL SECURITY BOARD; VOCATIONAL REHABILITATION, OFFICE OF; also, under SOCIETIES.

BLOCKADE. See ECONOMIC WARFARE, OFFICE OF; SHIPPING; WORLD WAR; and the countries affected, as BELGIUM, DENMARK, EIRE, FINLAND, FRANCE (and colonies), GERMANY, GREAT BRITAIN, GREECE, ITALY, JAPAN, NETHERLANDS, NORWAY, SPAIN, SWEDEN, SWITZERLAND, TURKEY. For *Blockade Running*, see WORLD WAR under *The War at Sea*.

BLOCKED NATIONALS. See FEDERAL BUREAU OF INVESTIGATION.

BLOCK LEADERS, BLOCK WORKERS. See CIVILIAN DEFENSE, OFFICE OF.

BLOOD PLASMA. See CIVILIAN DEFENSE, OFFICE OF; RED CROSS.

BOBSLEDDING. No competition for bobsledders was held in 1943, the giant Olympic run at Lake Placid, N.Y., remaining closed. Champions held over from 1942 are: Jimmy Bickford and Bill D'Amico, North American two-man team winners; Jimmy Bickford, Hugh Bickford, Dick Morse, and Lou Miron, North American and national A.A.U. four-man victors; Bud Washbond and Nick Ruscitto, national A.A.U. boblet titleholders, and Jimmy and Hugh Bickford, national junior two-man bob winners.

THOMAS V. HANEY.

BODY LICE. See INSECT PESTS.

BOEING B-17, B-29, and 314. See AERONAUTICS.

BOHEMIA AND MORAVIA. Two provinces of Czechoslovakia, which after being shorn of their Sudeten districts by the Munich Accord of Sept. 29, 1938, were occupied by German troops on Mar. 15, 1939, and proclaimed a Protectorate of the Reich the following day. Capital, Prague.

Area and Population. The Protectorate has an area of 19,058 square miles (Bohemia, 12,525; Moravia, 6,533) and a population estimated at 7,380,000 on Jan. 1, 1940, excluding German armed forces and German citizens immigrating into the Protectorate since 1939. As of Jan. 1, 1939, there were 4,472,353 inhabitants in Bohemia and 2,332,522 in Moravia. The inhabitants are Czechs except for a small German minority. The chief cities, with their 1937 populations, are: Praha (Prague), 962,200; Brno (Brünn), 291,800; Moravská Ostrava, 178,099 in 1935; Plzeň (Pilsen), 124,353 in 1935. The live birth rate per 1,000 inhabitants rose from 14.7 in 1939 to 18.3 in 1942; the death rate, from 13.0 in 1939 to 13.9 in 1942.

Production, etc. See YEAR BOOK for 1939, p. 181-182 for data on Czechoslovakia before the partition. Little statistical information on Bohemia and Moravia has since become available. Agriculture, manufacturing, forestry, and commerce are the principal occupations. Cereals, corn, potatoes, beet sugar, tobacco, and flax are the chief crops. Leading industrial products: Arms, rayon and other textiles, wood pulp, cement, shoes, glass, leather goods, iron and steel products, and innumerable others. Western Bohemia is one of the leading industrial areas of Europe. Estimated mineral and metallurgical production within the former Czechoslovak Republic in 1940 was (in metric tons): Coal, 31,000,000; iron ore, 2,000,000; pig iron, 1,200,000; zinc, 3,000; lead, 4,500; antimony, 900; bauxite, 1,000; mercury, 100.

Finance. The budget for the autonomous administration of the Protectorate in 1939 was: Receipts, 4,638,000,000 crowns; expenditures, 4,902,000,000 crowns (one reichsmark equalled 10 crowns). With the establishment of the customs union between the Protectorate and the Reich on Oct. 1, 1940, the German tax system was applied to Bohemia and Moravia. The puppet government at Prague thereafter had to obtain its small independent income from other sources. Since 1940 no budgetary accounts have been published. An annual assessment of 2,000,000,000 crowns was levied on the Protectorate by the Reich in 1939; according to a Berlin dispatch of Jan. 2, 1941, this sum was doubled in a new German-Czech agreement concluded at that time.

Government. The Berlin Cabinet's decree of Mar. 16, 1939, establishing the Protectorate, stated that Bohemia and Moravia "belonged henceforth to the territory of the Great German Reich." Germany assumed direct control of defense, foreign affairs, communications, transportation, customs, and currency, but declared the Protectorate autonomous in other matters, with its own organs and officials. The autonomous powers extended were purely nominal, being rigidly circumscribed by other provisions of the decree (see preceding YEAR BOOK, p. 67). The German Reichsfuehrer appoints a "Reich Protector in Bohemia and Moravia," who "has the task of seeing that the lines of policy laid down by the Fuehrer . . . are observed." Baron Constantin von Neurath, appointed as Protector Mar. 18, 1939, was "temporarily replaced" on Sept. 27, 1941, by Police General Reinhard Heydrich, who assumed the title of Deputy Reich Protector.

Heydrich, right-hand man of Heinrich Himmler, head of the Gestapo, was mortally wounded by an assassin on May 27, 1942. On May 28 Hitler appointed Kurt Daluege to succeed him as Deputy Reich Protector. German State Secretary for Bohemia and Moravia, Karl Hermann Frank.

Dr. Emil Hacha, elected President of the Czechoslovak Republic by the National Assembly Nov. 30, 1938, and signer of the capitulation agreement of Mar. 15, 1939, remained in office as President of the Protectorate. Gen. Ing. Alois Eliáš, who became Premier of the Prague Government Apr. 27, 1939, was arrested by the Gestapo Sept. 27, 1941, and condemned to death for treason. He was succeeded by Dr. Jaroslav Krejci. For developments in 1943, see *History* below. Also see separate article on CZECHOSLOVAKIA.

HISTORY

German Rule. Throughout 1943 the German authorities of the Protectorate continued their systematic efforts to stamp out the Czech spirit of independence. Wholesale executions, imprisonment, torture, deportation, conscription for labor or military service, economic pressure, manipulation of the educational system, and incessant propaganda were all employed with ruthless German efficiency to induce the Czechs to accept their assigned role as "an inalienable component within the Reich's frontiers." A handful of quislings collaborated, willingly or unwillingly, with the German overlords. But the great majority of Czechs resisted the campaign of mingled oppression and beguilement with fierce determination and implacable hatred. Bohemia and Moravia remained sullen centers of espionage and sabotage, of labor slowdowns and passive resistance. As the tide of war turned against the Axis Powers, the Czechs strengthened their underground organizations, established closer liaison with the Czechoslovak Government-in-Exile in London, and speeded preparations for the day of liberation and revenge.

The price the Czechs were compelled to pay for their resistance was detailed by Minister of State Hubert Ripka before the Czechoslovak State Council in London on July 23. On the basis of a report just received from the Czech underground, he said that the Germans had executed 50,000 Czech men and women, many of them without trial, between Mar. 15, 1939, and May 15, 1943. In the same period, Dr. Ripka reported, about 200,000 Czechs were thrown into German concentration camps while more than 500,000 others were conscripted for forced labor in Germany or German-occupied countries. He said that official German announcements recorded the execution of 3,500 Czechs between September, 1941, and June, 1943, after trial on charges of high treason, sabotage, hiding parachutists, possessing arms, and distributing illegal papers. He pointed out that many more Czech patriots died from torture or were executed without benefit of trial. Nor did his figures include the thousands of Czech Jews who were killed, imprisoned, or deported.

In a warning broadcast by the Prague radio on February 27, State Secretary Frank promised to break Czech resistance with harsher measures applied with "German thoroughness." He disclosed that recalcitrant Czech farmers were being dispossessed to make way for German farmers. On April 27 the Prague radio said that the relatives of President Eduard Benes of the Czechoslovak Government-in-Exile had been imprisoned in retaliation for his broadcasts of March 18 and April 23 from London to the Czech people. The

Czechoslovak Information Bureau in New York announced April 27 that it had received confirmation of the execution by hanging of Mme. Franciska Plaminkova, former Senator in the Czechoslovak Parliament and for two decades president of the Czechoslovak Women's Council. On October 29 the Czechoslovak Information Bureau in London reported that German courts-martial at Olomouc in Moravia had sentenced 519 Czech patriots to death, the largest mass death sentence imposed at one place in the Protectorate since the German occupation.

Labor conscription was extended to include all Czech women between 17 and 45 except those with young children in a decree issued February 2 by Walter Bertsch, German Minister of Economy and Labor for the Protectorate. At the same time he made the issuance of new ration books conditional upon registration for war work. Another decree issued by Bertsch on March 29 made owners and managers of closed enterprises personally responsible for the registration of former employees for war work. His labor mobilization drive netted an additional 550,000 Czechs, according to reports reaching London in September. Reports also indicated that the conscription of Czech youths for military and semi-military service in German armed forces was being extended from the Sudeten areas into the purely Czech areas of the Protectorate.

Frick Appointed Protector. A shake-up among the high German officials of the Protectorate took place August 24 simultaneously with the reorganization of Hitler's Cabinet (see *GERMANY under History*). Dr. Wilhelm Frick, whom Hitler replaced as Reich Minister of Interior, was appointed Reich Protector of Bohemia and Moravia in place of Baron von Neurath. Von Neurath's office had been a purely nominal one since the appointment of Reinhard Heydrich as Deputy Reich Protector on Sept. 27, 1941 (see above under *Government*). Dr. Karl Hermann Frank, the German State Secretary for Bohemia and Moravia, retained his post but was elevated to the rank of Reich Minister. He assumed formal direction of the Protector's administrative offices and thus became actual ruler of the Protectorate. Frick's position was understood to be largely that of a figurehead. Frank's appointment to the German Cabinet was interpreted as a further step toward the incorporation of the Protectorate in the German Reich. The sole powers retained by the Czech puppet government at Prague concerned local finances, cultural affairs, and the administration of civil courts.

Influx of Refugees. From time to time during the year the German authorities issued additional lists of Czechoslovak men and women active in the liberation movement who were deprived of their citizenship. A list published May 17 in Berlin contained 176 names. Another issued June 30 and July 1 gave the names of 171 Czechs whose property had been confiscated by the Reich. Loss of citizenship was equivalent to the loss of property and was frequently accompanied by the seizure of relatives as hostages. The Germans were said to have imprisoned more than 4,000 relatives of Czechoslovak officials and other emigrées in London. Many of the confiscated properties were turned over to Germans evacuated from the bomb-ravaged cities of western Germany. In October it was estimated that some 300,000 Germans from the western provinces had taken refuge in Prague and other Czech cities.

These refugees were reportedly regarded as unwelcome guests not only by the Czechs but also by the older German inhabitants of the Protec-

torate. They placed an additional strain upon the scanty food supply. A report presented to the Czechoslovak State Council in London in September stated that the food rations in Bohemia and Moravia were everywhere "under the minimum requirements for nourishment" but that conditions were better in industrial Bohemia than in Moravia, where the Germans were not so much interested in maintaining production.

R.A.F. Raids Skoda Works. Industrial sabotage by Czech workers was supplemented on April 16 by a heavy R.A.F. raid on the huge Skoda munition works and arms factory at Plzen (Pilsen) in Bohemia. Extensive damage was inflicted upon the Skoda plant. German reports, believed to be exaggerated, stated that 800 persons, mostly Czech and German workers, were killed during the raid. With the establishment of Allied airfields in Italy later in the year, German war factories in Bohemia and Moravia were exposed to the danger of more frequent and devastating attacks.

BOK FOUNDATION. See *PHILANTHROPY under Foundation Activities*.

BOLIVIA. A republic of South America. Sucre is the seat of the Supreme Court and nominally the capital, but La Paz, the largest city, is the actual seat of the government.

Area and Population. Taking into account the Chaco boundary settlement of 1938 (see *YEAR BOOK*, 1938, p. 131 f.), Bolivia has an area estimated at about 416,040 square miles. The population is estimated at 3,533,900, divided racially as follows: White, 13.08 per cent; mestizo (mixed), 27.51; Indian, 52.34; others, 7.07. Foreigners in Bolivia number about 7,500, with Peruvians and Germans predominating. Population of La Paz at the municipal census of Oct. 15, 1942, 301,450. Estimated populations of other chief cities: Cochabamba, 80,000; Oruro, 40,000; Potosi, 35,000; Santa Cruz, 30,000; Sucre, 32,000. Spanish is the language of the educated classes. The Indians speak mainly Quechua and Aymara.

Education and Religion. The illiteracy rate of the population seven years and over was 83.5 per cent in 1900. It still remains high, although all illiterates are nominally required to attend school. The 1936 (latest available) school enrollment was: Elementary, 73,854; secondary, 5,522; special schools, 4,615; universities, 1,482. Roman Catholicism is the state religion but other forms of worship have full liberty.

Defense. Military training is compulsory. As of Jan. 1, 1941, the active army numbered 9,600; trained reserves, 82,187; active air force, 160. Defense appropriations were 246,000,000 bolivianos in 1943.

Production. Although only 60,000 persons (less than 2 per cent of the total population) are engaged in mining, the industry accounted for 99 per cent of Bolivia's exports in 1941. Agriculture and stock raising support about two-thirds of all Bolivians. The chief crops are wheat, quinoa, corn, rice, barley, sugar cane, cotton, coca leaves, tobacco, and coffee. Manufacturing is confined almost entirely to the production of foodstuffs and beverages, textiles, furniture, tobacco, glassware, chemical products, and other commodities for local consumption.

Tin and silver are the most important minerals, but copper, gold, tungsten, bismuth, lead, antimony, zinc, and petroleum also are produced. The production of fine tin was 38,905 metric tons in 1942 and 42,887 tons in 1941, as compared with the peak production of 46,338 tons in 1929; tung-

sten, 3,363.2 metric tons in 1942. Provisional figures for the chief mineral exports in 1941 in fine metric tons, with the value in pounds sterling in parentheses, were: Tin, 42,740 (£11,978,908); tungsten, 2,613 (£1,136,406); silver, 229 (£545,925); antimony, 14,872 (£531,884); lead 15,654 (£436,687); copper, 7,274 (£379,897). Output of crude petroleum in 1940 was about 110,000 bbl. Beginning Aug. 29, 1942, a pipeline linking the oil wells of southeastern Bolivia with Argentina across the River Bermejo began the delivery of crude petroleum to the Argentine Petroleum Monopoly at the rate of 50,000 cubic meters annually. Exports of crude rubber increased to 1,486 metric tons in 1942 as a result of the active war demand. See ANTIMONY; TIN.

Foreign Trade. Imports in 1941 were valued at £7,769,000 (in pounds sterling of 13.83 bolivianos of 18 pence each to the pound) against £5,700,000 in 1940; exports, £15,900,199 (£13,063,641 in 1940). In U.S. dollars the 1941 totals were: Imports, \$31,309,037; exports, \$64,077,805. See *Production* for principal 1941 export items. For distribution of trade by countries in 1941, see 1943 YEAR BOOK.

Finance. Preliminary budget estimates for 1943 balanced at 1,227,000,000 bolivianos compared with actual receipts of about 847,000,000 bolivianos and expenditures of 957,000,000 bolivianos in 1942. Taxes on mineral exports provided about 60 per cent of the 1942 revenue, while 500,281,419 bolivianos of expenditures were set aside for the payment of debts and 510,526,899 for general expenses. Actual receipts and expenditures in 1941 were 1,041,000,000 and 1,018,000,000 bolivianos, respectively.

The boliviano was pegged to the U.S. dollar at 40 to 1 on May 10, 1940, 46 to 1 on June 21, 1941, and 42 to 1 on Feb. 12, 1943. The average official exchange rate of the boliviano was \$0.023 in 1941 and \$0.0215 in 1942; average curb rate, \$0.0185 in 1941 and \$0.02 in 1942.

Transportation. Bolivia in 1943 had some 1,402 miles of railway lines in operation and over 10,300 miles of highways. Construction was continued on the Corumbá-Santa Cruz railway, financed jointly by Brazil and Bolivia, which will provide direct connections between Santa Cruz and the port of Santos, Brazil. In accordance with the 1941 report of U.S. Army engineers (see 1942 YEAR BOOK, p. 70), it was decided in 1942 to construct a modern automobile highway between Santa Cruz and Cochabamba (225 miles) with part of the \$25,000,000 credit obtained from the United States (see below under *History*). Construction was started in 1942 upon the following other main highways: Sorata-Apolo; Oruro-Potosí, Oruro-Independencia, San Antonio-Todos Santos, Uyuni-Ollagüe, Cochabamba-Chimoré, Tarija-Fortín Campero, Valle Grande-Lagunillas. Extension of the North Central Railway of Argentina from Yacuiba on the Bolivian frontier to Villa Montes was under way in 1943 (see 1943 YEAR BOOK, p. 81-82).

La Paz is a trunk line station on the Pan American-Grace air route from the United States to Buenos Aires. The same system operates a line from La Paz to Rio de Janeiro via Cochabamba, Santa Cruz, and Puerto Suárez in eastern Bolivia. Lloyd Aereo Boliviano, a Panagra subsidiary, operates domestic airlines from La Paz to Oruro in the south, to Apolo in the Yungas, and to the northeastern cattle and rubber regions via Cochabamba, Trinidad, Riberalta, Cobija, and Guayaramerin, terminus of the Madeira-Mamoré Railway. Modernization and improvement of airports at La Paz,

Cochabamba, Oruro, Uyuni, Santa Cruz, Riberalta, and Guayaramerin were under way in 1943. Also see *History*.

Government. The 1938 Constitution (see YEAR BOOK for 1938, p. 96) vested executive power jointly in the President and his cabinet and legislative power in a Congress of two Chambers. The President is elected for four years by direct suffrage and may not succeed himself. The Senate has 27 members (3 from each department), one-third elected every two years for six-year terms. The Chamber of Deputies has 109 members elected directly for four years and renewed by halves every two years. The suffrage is restricted to male Bolivians of 20 years or over who can read and write and who are inscribed in the Civic Register. President, Gen. Enrique Peñaranda del Castillo, who assumed office Apr. 15, 1940. For developments in 1943, see below.

HISTORY

Bolivia Enters War. Continuing the policy of close collaboration with the United States inaugurated in 1941, the Peñaranda Government on Apr. 7, 1943, declared war against Germany, Italy, and Japan. The decree was issued while Vice President Henry A. Wallace was in La Paz on his successful tour of the South American countries. It was followed by Bolivia's formal adherence to the United Nations Declaration of Jan. 1, 1942, through an exchange of notes with Secretary of State Cordell Hull in Washington on May 1. The war declaration was subject to ratification by Congress, which did not reconvene until August. Congressional approval was finally given on November 26, and on December 4 the Government promulgated a formal war declaration. Two weeks later it was overthrown by a military coup led by pro-Axis military men and civilians.

Labor Conscription. The declaration of war had little significance from a military standpoint. But it was of direct aid to the United Nations war effort. For under the mobilization order contained in the decree, an estimated 10,000 additional workers were conscripted for labor in the mines. This meant increased production of tin, tungsten, antimony, and other scarce strategic minerals for the use of United States and British war industries. An earlier decree of January 24 had given all mine workers the status of army conscripts, thus exempting them from military service.

The additional workers needed by the mining companies were called up and transported to the mines by the army in accordance with instructions issued by the General Office of Mobilization Coordination (established April 30). Other workers were conscripted for labor on farms and on highways in order to increase food production and facilitate its distribution—a measure prompted by the difficulty of maintaining the normal heavy flow of food imports. According to Bolivian officials, all labor conscripts were employed at the prevailing wages in the industries to which they were assigned.

The Government's labor conscription policy was adopted soon after the fatal clash between troops and striking miners of the Patiño tin mines at Catavi in December, 1942 (see 1943 YEAR BOOK). This clash precipitated both an international incident and an internal political issue that rocked the Peñaranda Government throughout 1943. It moved Ernesto Galarza, Mexican-born official of the Pan American Union, to accuse the U.S. Ambassador to Mexico, Pierre Boal, with bringing pressure upon the Bolivian Government to prevent applica-

tion of a new labor code designed to improve the miners' wages and working conditions. Under-Secretary of State Sumner Welles flatly denied the charge. He said Boal had merely inquired as to the effect of the labor code upon the cost of tin and other Bolivian minerals purchased by U.S. war agencies. Welles pointed out that the labor code had been promulgated by the Bolivian Government on Dec. 8, 1942, some days before the clash at the Catavi mines.

Inquiry into Labor Conditions. These developments exposed the Peñaranda Government to the charge that it was serving as the tool of "Yankee imperialism" in exploiting Bolivian labor. The Government answered this propaganda by establishing on January 23 a committee of labor experts to "study the improvement of the conditions of health, hygiene, salaries, and security of workers in general and particularly of mine workers." The U.S. Government, as purchaser of the bulk of Bolivia's mineral output, was invited to participate in the inquiry. The State Department appointed five American labor experts, headed by Judge Calvert Magruder of the U.S. Circuit Court in Boston, to join Bolivian experts in conducting the investigation.

The American mission arrived in La Paz February 2 and went on tour of Bolivia's principal mining districts and of the agricultural and rubber-producing regions of the east and northeast. At the Catavi mines it obtained the promise of labor leaders that no disturbances would occur to hamper the output of tin ore. At the same time representatives of the Patiño interests and the government agreed to cooperate in improving conditions of the workers.

The report of the joint U.S.-Bolivian commission, as submitted to the Bolivian Government on March 14, was made public by the State Department in Washington April 20. It found low wages the rule rather than the exception (tin miners received the equivalent of 10 cents a day for 12 hours work), widespread insufficiency of medical, dental, hospital and nursing care, frequent lack of safety appliances, promiscuous use of child labor, "total absence of free association and collective bargaining," and inadequate educational facilities.

Recommendations of the commission included: Higher standards and pay for teachers, appointment of a group of U.S. educators to Bolivian normal school faculties for a period of years, elimination of restrictions on free association, lifting of the ban on labor meetings unless attended by labor inspectors, establishment of collective bargaining by the mining companies and a minimum wage system, and improvement of workers' sanitation, housing, and health conditions. For a good description of Bolivian economic conditions and labor problems, see the following article by a member of the U.S. mission: Robert J. Watt, "Bolivian Puzzle," *The Inter-American*, July, 1943, p. 17 f.

Labor Reforms. The Bolivian Government indicated its desire to carry out the recommendations of the commission so far as possible. A bill for the establishment of a social security system was drafted for submission to Congress. Studies were initiated looking toward the creation of a system of inspection and supervision over working conditions. Two hospitals and a number of dispensaries were constructed in the rubber-producing regions.

U.S. Economic Aid. While cooperating with the foregoing short-term program for stimulation of mineral production, the U.S. Government extended its contribution to the long-term program for economic development initiated in 1941 and 1942 (see

preceding YEAR BOOKS). In brief this program called for the development of Bolivia's resources through a development corporation jointly financed by the Bolivian Government and the U.S. Export-Import Bank.

The Bolivian Development Corporation got under way Dec. 29, 1942, with the signing in Washington of a tripartite contract by the Bolivian Government, the Development Corporation, and the Export-Import Bank. Under the contract the Government contributed \$10,500,000 toward the capital of the Corporation and guaranteed a credit of \$15,500,000 extended to the Corporation by the Export-Import Bank. This gave the Corporation a capital of \$26,000,000 to increase farm production in the eastern mountain valleys and lowlands and to build transportation links between these farming and ranching districts and the mining cities of the high Bolivian plateau, which were dependent upon high-priced food imports from abroad. The board of directors of the Corporation was composed of three appointees of the Bolivian Government and three appointees of the Export-Import Bank. Rowland Egger, an experienced U.S. business man, was named manager and Carlos Guachalla, former assistant manager of the Banco Central of Bolivia, president of the board of directors.

Of the Corporation's capital, \$12,000,000 was allocated for the construction of highways, including some \$8,000,000 for a modern road connecting Cochabamba on the plateau with Santa Cruz in the eastern lowlands. Work on this important highway was begun during 1943 with machinery imported from the United States (see above under *Transportation*). Another \$5,500,000 was allocated for the development of the oil industry in eastern Bolivia. Four millions were to be devoted to the development of the sugar industry, \$1,000,000 to mining, and lesser amounts for the promotion of rice growing, cattle raising, etc.

Vice President Wallace witnessed the signing in La Paz on April 6 of a U.S.-Bolivian agreement for the establishment by the Bolivian Development Corporation of six experimental stations to encourage farm production and cattle breeding. The agreement called for the expenditure of \$150,000 annually on the project, with the U.S. and Bolivian governments and the Corporation contributing equally. Later in the year the Corporation arranged to lend \$500,000 to the Banco Agrícola to encourage rice and wheat production, the importation of improved strains of cattle, and the establishment of sugar refineries.

In response to the invitation extended in 1942, President Peñaranda in May made an official visit to the United States, accompanied by military and economic advisers. After conversations held in Washington, he and President Roosevelt on May 14 issued a joint statement saying they had considered war and postwar problems affecting the long-term economic interests of the two countries. They announced that officials of the two governments were studying ways of intensifying cooperation and insuring a continuing exchange of products and raw materials on a stable and durable basis. Peñaranda addressed both the U.S. Senate and House of Representatives. Besides the United States and Canada, he visited 11 other American republics during a nine-weeks' tour. Upon his return home July 5, he was greeted by more than 50,000 residents of La Paz.

Drive for Ports. Bolivia's declaration of war against the Axis was accompanied by the renewal of the recurrent diplomatic and press campaign for the

restoration of one of the Pacific ports lost to Chile in 1883. President Peñaranda reaffirmed Bolivia's aspirations for an outlet on the Pacific in a speech at Mexico City while on his tour. The Bolivian demand was once again firmly rejected by the Chilean Government, which granted Bolivia free port privileges at Arica in 1929.

On the way home from Washington Peñaranda stopped in Rio de Janeiro for important conferences with President Vargas. There he obtained important concessions from Brazil, including a trade pact, free port privileges at Santos, and a tentative agreement to exchange unspecified Bolivian frontier territory for an undeveloped Brazilian port on the Paraguay River. In the trade pact Brazil agreed to provide financial aid and materials to complete the Santa Cruz-Corumbá railway in return for Bolivian oil and other export products.

The free port concession at Santos was of great potential importance for the development of the eastern Bolivian lowlands, which would have direct railway communications with that Atlantic port once the Corumbá-Santa Cruz line was completed. This was scheduled for late in 1944.

Following his return to La Paz Peñaranda renewed his demand for a Pacific port and sought to enlist Argentine aid. The Argentine Foreign Office, however, was reported to have sided with Chile. Bolivia was dissuaded from formally raising an issue likely to disturb the peace of South America.

Economic Conditions. The mining industry enjoyed an extraordinary boom in 1943 as a result of the heavy U.S. and British demand for tin and other strategic minerals. There were minor booms in rubber and cinchona bark. Export taxes levied on these products boosted Government revenues to the highest levels ever recorded and enabled it not only to balance the budget but to reduce its debt to the Banco Central while providing capital for the Bolivian Development Corporation. The boliviano was strengthened by the accumulation of dollar and sterling exchange. However no move to renew payments on Bolivia's defaulted foreign debt was made by the end of the year.

The encouraging picture offered by the mining boom and the Government's improved financial position was offset by the continuance of extreme price inflation, which provoked mounting unrest among low-income groups of the population. In some cases rents had risen 500 per cent in three years. Government efforts at price control proved of little avail for lack of adequate enforcement machinery. A United States "decentralization plan" of export control, which went into effect on Apr. 1, 1943, restricted the importation of U.S. goods into Bolivia to actual needs.

Internal Politics. The Government was under persistent attack during the year from the Leftist and pro-Nazi groups in Congress on the one hand and from the powerful mining companies on the other. The Leftists attacked the conservative government coalition for its social and economic policies, which they declared were ruining the country, and particularly for the disturbances at the Catavi mines. The mine owners objected strenuously to the heavy export taxes on minerals.

President Peñaranda adopted a conciliatory attitude toward both groups of opponents. While in New York he invited his former rival for the Presidency, Dr. José Antonio Arze, chairman of the Left Revolutionary party, to confer with him. According to a report of the interview made public by Dr. Arze on May 22, Peñaranda stated that several Leftist leaders exiled after the Catavi strike

had been permitted to return home, that he would grant "the fullest guarantees to labor unions," and that the labor code would be resubmitted to Congress to revise some aspects of it objectionable to the workers. The President also authorized Arze's Left Revolutionary party to hold its second annual convention in 1943, but warned it against inviting the participation of foreigners in Bolivian politics.

Upon the reconvening of Congress in August, the Left Revolutionaries joined with the National Revolutionary party in an attack upon the Government that forced the resignation of the entire Cabinet on August 27. A bitter debate on responsibility for the Catavi incident continued until September 15, when a vote revealed 48 Deputies supporting the Government and 47 in favor of censure. On September 17 the President appointed a new Cabinet representing a coalition of the four "traditional" parties—Republican, Genuine Republican, Republican Socialist, and Unified Socialist. It was anticipated that if these four parties could remain united against the opposition they could win the Presidential and Congressional elections scheduled for May, 1944, without difficulty.

The state of siege decreed on Dec. 14, 1942, continued in effect, but the press censorship imposed under the decree was lifted on February 3. On May 18 a general censorship of the press and of all forms of communication was again imposed. The press censorship was lifted on July 27.

Government Overthrown. Before dawn on December 20 politicians and young army officers of nationalist leanings overthrew the Government by a military revolt in La Paz. The coup was led by Victor Paz Estenssoro, former Cabinet Minister and chief of the National Revolutionary party, who had strongly opposed Peñaranda's close collaboration with the United States. Paz Estenssoro had been arrested in 1941 in connection with the abortive pro-Nazi coup of that year (see 1942 YEAR BOOK), and shortly before the 1943 revolt had conferred with Argentine nationalists and Germans in Buenos Aires. The platform of his National Revolutionary party was anti-United States, anti-Communist, and hostile to foreign capital. His chief aide was Major Alberto Taborga, head of the Bolivian traffic police. The revolt was carried out by Taborga's well-armed police, assisted by army officers and a group of armed civilians believed to be members of the National Revolutionary party. They surprised and overwhelmed the Government officials and the higher army officers and then overcame the La Paz regular army garrison in street fighting which lasted for four hours. One person was killed and 34 wounded.

By 7 a.m. the revolutionaries were in full control. Two hours later they broadcast an announcement of President Peñaranda's resignation. He was allowed to leave the country. Upon his arrival in Arica, Chile, two days later, Peñaranda denied that he had resigned. Meanwhile a revolutionary junta had assumed control of the Government at noon on December 20. The members were: President, Major Gualberto Villarroel, a veteran of the Chaco War; Foreign Minister, José Tamayo; Finance, Victor Paz Estenssoro; Defense, Major Celestino Pinto; Government, Major Alberto Taborga; Public Works, Major Antonio Ponce; Education, Major Jorge Calero; Agriculture, Carlos Montenegro; Economy, Gustavo Chacón; Labor, Victor Andrade; Secretary-General, Augusto Céspedes.

The leaders of the junta took immediate steps to calm apprehension among the other American republics by declaring their support of the United

Nations' cause and professing pro-democratic sentiments. They asserted the revolt was motivated entirely by the Peñaranda Government's alleged corruption and repression of the masses and announced their intention of restoring constitutional government. On December 24 the Nationalist Revolutionary Government decreed that the 1938 Constitution should remain in force with minor changes, that Bolivia's commitments to the United Nations should be adhered to in their entirety, and that a plebiscite should be held "at the first opportunity."

Recalling that similar assurances had been given by the leaders of the Argentine military revolt the previous June, only to be repudiated after recognition had been obtained, 19 of the American republics withheld recognition of the new Bolivian regime for closer scrutiny and mutual consultation. Argentina granted recognition the end of December. In an apparent effort to dispel these suspicions of its objectives, the La Paz Government on December 30 instructed its Washington representative to initiate negotiations for recognition of the Soviet Union.

See ARGENTINA, BRAZIL, and CHILE under *History*; LABOR CONDITIONS under *Labor Movements*; ROADS AND STREETS; SPANISH-AMERICAN LITERATURES; WORLD WAR.

BOLIVIAN DEVELOPMENT CORPORATION. See BOLIVIA under *History*.

BOLL WEEVIL, BOLLWORM. See INSECT PESTS.

BOMBS. The bazooka *rocket gun* made its debut against enemy tanks in the North African campaign in the summer of 1943. The bazooka launcher is a metal tube open at both ends, more than 50 inches long and less than 3 inches in diameter. It is operated by two men; the loader who inserts the rocket, and the firer who squeezes the trigger. This electrically ignites the propellant which flashes from the rear of the launcher tube and sends the rocket on its sinister journey. The rocket itself is about 2 feet long with high explosive in the head, a propelling charge in its tubular body, and a finned tail to provide accuracy in flight.

The rocket is the terrible new weapon of this war. Rocket machines presumably first appeared in Russian Stormovik planes strafing Nazi tanks; subsequently they were used by the Germans against American heavy bombers in an attempt to demoralize Fortresses or Liberators flying in close formation without exposing the German fighters to their heavy fire. The Soviet anti-tank rockets were fired by contact fuzes like ordinary naval shells; the German anti-bomber rockets are fired by devices like the flak sent up by anti-aircraft guns. In both, the theory is to impart additional thrust forcing the rocket to pierce through thick armor plate. Unlike a shell which has its maximum velocity at the instant it issues from the muzzle of the gun, the rocket attains its maximum velocity at the moment of impact.

The British counterpart of the bazooka is the PIAT (Projector, Infantry Anti-Tank). This weapon projects a 2¼-lb. bomb, filled with high explosives, which explodes on impact with the target. The propellant force is derived from the explosion of a cartridge in the tail.

Several types of *incendiary bombs* are described and diagramed in the Office of Civilian Defense publication 2016 issued in March, 1943. One-kilogram and two-kilogram magnesium incendiaries with or without high explosives, and six types of containers for holding 36 to 700 of them, are included. German phosphorus bombs are described:

one weighs 90 pounds and contains 30 pounds of a viscous solution of phosphorus, oil, benzene, and rubber. On impact the bomb is split open, and the liquid, scattered some yards, simultaneously ignites. The phosphorus can be extinguished with water, but care must be exercised lest the material be washed into some inaccessible spot where it can later re-ignite. Japanese incendiaries described in the publication include: a one-kilogram incendiary with a lethal range of 50 feet, filled with picric acid burster charge and with a main filler of phosphorus; a 50-kilogram bomb containing black powder burster charge and three magnesium alloy-thermit inserts; a 60-kilogram incendiary high-explosive bomb filled with approximately 475 rubber pellets impregnated with phosphorus dissolved in carbon disulphide, which scatter for 50 yards; and a 60-kilogram bomb filled with paraffin wax and kerosene in six steel compartments—upon landing thermit melts and ignites the oil, which is scattered.

Flame throwers have been revived in this war by the Russians in Finland, by the Germans in Belgium, and by Americans in the Pacific. Essentially a blow-torch in theory, it produces terrific heat, consumes oxygen in any confined space such as a foxhole, and produces deadly carbon monoxide.

Other new devices include fragmentation bombs dropped in parachutes to delay the explosion, so that low-flying bombers can get out of range; radio-guided rocket gliders; a torpedo carrying two auxiliary torpedoes attached to it; and a steadier-flying bomb with the propellant in a detachable tail, which falls off when the bomb is clear of the bore.

Colored smokes have been developed so that ground forces can identify themselves to planes overhead. One form, packed as a hand grenade, emits red, orange, yellow, green, violet, black, or white smoke, and may be used on water as well as on land. Special patterns laid on the ground can signal in code between tanks and airplanes. For laying smoke screens, the Germans are using a six-barreled fog thrower, the "nebelwerfer," a weapon that launches ordinary field-gun caliber projectiles.

The Chemical Warfare Service issued in December, 1943, new symbols for the more important *war gases*. These include Lewisite (L), mustard (M), mustard-Lewisite mixture (HL), brombenzyl cyanide (BBC), phenyl dichloride (PD), Arsine (SA), cyanogen chloride (CC), hydrogen cyanide (OC), and nitrogen mustard (HN).

See CHEMISTRY under *Explosives*; MILITARY PROGRESS.

HUBERT N. ALYEA.

BONAIRE ISLAND. See CURAÇAO.

BONUSES. See NATIONAL WAR LABOR BOARD; STATE LEGISLATION under *War and Postwar*.

BOOBY TRAPS. See MILITARY PROGRESS.

BOOKS. See LITERATURE, AMERICAN AND BRITISH; the articles on foreign literature; the bibliography under the various topics; LIBRARY PROGRESS.

BORDER PATROL. See IMMIGRATION.

BORNEO. See BRITISH MALAYA; NETHERLANDS EAST INDIES under *Area and Population*.

BOUGAINVILLE ISLAND. See NEW GUINEA, TERRITORY OF; WORLD WAR.

BOUNDARY DISPUTES. See ALBANIA, BULGARIA, FINLAND, GREECE, HUNGARY, RUMANIA, THAILAND, YUGOSLAVIA, under *History*.

BOWLING. Bowling continued to gain in popularity in 1943 despite cancellation of the American Bowling Congress tournament and the women's national

championships, the sport's biggest events. Industrial, club, church, and "good neighbor" leagues kept thousands of alleys humming and many service men became devotees of the game with the introduction of kegling to camp recreation halls.

The individual, two-man, and five-man match-game contests were the only tourneys of national scope. Ned Day of Allis, Wis., whose four-year reign as singles king had been interrupted by Connie Schwoegler of Madison, Wis., last winter, won the title for the fifth time in December of 1943. Voted the bowler of the year by writers, Day toppled 13,371 pins, won 47 games and lost 18 in winning the title. Nelson Burton and Frank Mataya, St. Louis stars, won the doubles, and the Detroit Strohs retained team honors. The Strohs defeated the A.B.C. champion Chicago Budweisers by 461 pins in an eight-block \$1,000 challenge match.

Miss Laura Stellmacher, Chicago match-play queen, turned in the best series for a woman bowler when she rolled 718 in a mixed doubles contest, marking up games of 287 (only 13 pins short of a perfect score), 197, and 234.

The Bowlers Victory Legion made a distinct contribution to the war effort in 1942-43, raising \$300,000 for the Red Cross and \$90,000 for the U.S.O. in addition to selling more than \$1,000,000 worth of bonds through the medium of local tournaments.

Buffalo will be the site of the A.B.C.'s first post-war tourney and till then the champions remain: John Stanley, Cleveland, individual; Ed Nowicki and George Baier, Milwaukee, doubles; Chicago Budweisers, team, and Tod Moskal of Saginaw, Mich., all-events. Women's national titleholders for the duration are: Tillie Taylor, Newark, N.J., singles, Stella Hartrick and Clara Allen, Detroit, doubles, Chicago's Logan Square Buicks, team, and Nina Van Camp, Chicago, all-events.

THOMAS V. HANEY.

BOXING. With more than 4,000 professional boxers, including five champions, serving in the armed forces, it was only fitting that the Boxing Writers Association name all our pugilists now fighting for Uncle Sam as 1943 winners of the Eddie Neil Memorial Trophy, a prize awarded annually to the "boxer of the year."

Joe Louis, heavyweight; Gus Lesnevich, light heavyweight; Tony Zale, middleweight, and Red Cochrane, welterweight, were in the service all year and Willie Pep joined up after a successful defense of his featherweight crown. With such champions as these missing and most of the titles "frozen" for the duration, boxing faced some rough going at the start of the year, but managed to keep moving, with the result that the sport enjoyed a rather good year. For a while the prospects of a return meeting between Sergeant Joe Louis and Corporal Billy Conn for the heavyweight title appeared bright, but the War Department stepped in and firmly refused to permit the match. Louis carried on in an extensive tour of Army camps, giving exhibitions, and Conn confined his activities to Army duties.

After Pep joined the Navy there was championship activity in only two divisions—lightweight and bantamweight—and it was a case of "Little man what now?" for Mike Jacobs and other promoters who managed to escape near disaster by the skillful matching and rematching of the little fellows.

Beau Jack, the one time bootblack in a Georgia golf club, who soared to the top of the lightweight ranks in 1942, lost and regained his title

in 1943. The Beau, recognized as 135-pound ruler by New York and New Jersey as the year opened, lost to Bob Montgomery of Philadelphia in May, whereupon Pennsylvania promptly granted recognition to his conqueror. Then in November, Jack outpointed his Negro rival to regain the championship. Jack proved the greatest gate attraction of the season, his six bouts at Madison Square Garden grossing \$485,515. The year's biggest ring crowd, 19,986 persons, paid \$104,976 to see the Beau outpoint Henry Armstrong in a nontitle fight at the Garden in April.

Manual Ortiz, little Mexican who wears the world bantamweight crown, proved the "fightingest" champion of them all, defending his title no fewer than eight times, which set a new modern record for a champion. Ortiz defeated Kenny Lindsay, former champion Lou Salica, Lupe Cordoza, Joe Roberts (twice), Fileo Gonzalez, Leonardo Lopez, and Benny Goldberg.

Pep, who had compiled a record of sixty-two straight triumphs, finally met defeat in March when Sammy Angott, coming out of the retirement which had caused him to surrender his world lightweight laurels in 1942, outboxed the Hartford fighter in an over-the-weight bout. Three months later Pep successfully defended his featherweight championship against Sal Bartolo in Boston, and shortly after that entered the Navy.

Meanwhile the National Boxing Association, withholding championship recognition from Pep, sanctioned a featherweight match between Jackie Wilson and Jackie Collura, and the latter won. Two months later Collura again beat Wilson, but in August Phil Terranova defeated Collura to gain recognition as the N.B.A. champion.

Beau Jack's lightweight crown also is very much in dispute, New York State recognizing the Beau as king of his class while the N.B.A. still regards Angott as its champion.

Ray Robinson, top welterweight, after winning 41 bouts in a row, was outpointed by Jack La Motta in one of the year's biggest surprises, but Robinson reversed this setback before going into the Army. Other major upsets were Lee Savold's heavyweight defeat by Eddie Blunt, a rival he later knocked out in one round, and Bobby Ruffin's clear-cut triumph over Beau Jack shortly before the Beau regained the disputed lightweight honors.

The University of Wisconsin dominated the National Collegiate A.A. championships, its boxers capturing titles in five of the eight classes contested, while Syracuse carried off the Eastern Intercollegiate team laurels, the upstate New Yorkers winning in six of the eight divisions. Walter Moore of Chicago annexed honors in the most important national A.A.U. class, the heavyweight group. See RADIO PROGRAMS.

THOMAS V. HANEY.

BRASS AND BRONZE. See COPPER; ZINC.

BRAZIL. A republic of South America, comprising 20 States, the Federal District, and seven Federal Territories. Capital, Rio de Janeiro.

Area and Population. Area, 3,286,170 square miles; census population, 41,565,083 in 1941 (30,635,605 in 1920). Italian, Portuguese, and Spanish represented 76 per cent of all immigrants entering between 1820 and 1939; Germans, 4.9 per cent; Japanese, 3.9 per cent. Immigrants in 1940 numbered 33,285 (Portuguese, 13,123; North Americans, 4,337; Argentines, 3,516; Germans, 1,783; Japanese, 1,471). About 60 per cent of the population is estimated to be pure white, 25 per cent of mixed

white, Negro, or Indian blood, 12 per cent Negroes, and the rest Asiatics (chiefly Japanese) and aboriginal Indians. The southern States are predominantly white while those in the north have strong admixtures of Negro and Indian blood. Populations of the chief cities: Rio de Janeiro, 1,801,784; São Paulo, 1,500,000; Recife (Pernambuco), 348,472; Salvador (Baía), 291,500; Porto Alegre, 275,739; Belo Horizonte, 211,650; Belém (Pará), 208,706; Fortaleza, 174,855; Niterói (Nichteroy), 143,004; Curitiba (Curityba), 142,185; Santos, 140,000; Manaus, 107,456. Portuguese is the official and principal language, but Italian and German are widely used in the southern States.

Defense. Military training is compulsory for all males from 21 to 45 years of age, the first year in the ranks and the rest in the reserve. Brazil entered World War II on Aug. 22, 1942, with an active army of more than 100,000 and with some 291,000 trained reserves, including 32,500 State troops. The independent air force had about 3,500 officers and men and 150 planes. The navy consisted of 2 battleships and 2 cruisers, all laid down in 1907 but extensively refitted, 1 destroyer, 6 torpedo boats, 4 submarines, 6 minelayers, and various auxiliary craft. Reserves of all armed forces were mobilized by the decree of Sept. 16, 1942. Six months later it was reported that the military forces had been tripled, and that air and naval forces were likewise rapidly expanding, with the aid of equipment supplied by the United States. Six destroyers and nine mine-sweepers constructed in Brazilian yards were reportedly added to the fleet in 1943.

U.S. military, naval, and air missions advise the Brazilian forces. Under the lend-lease agreement of Oct. 1, 1941, the U.S. Government agreed to furnish arms and other military equipment valued at \$90,000,000 to \$110,000,000. Another agreement signed Mar. 3, 1942, provided for expanded lend-lease aid. After Brazil entered the war, American and Brazilian naval and air forces patrolled Brazil's coastal waters from Brazilian bases. U.S. funds and technicians helped to complete during 1943 a chain of important new air bases at Natal, Recife, Belém, and other strategic points. In March Parnamarin Field at Natal was reported in full-scale operation, handling a volume of traffic to and from Africa that made it one of the world's largest transoceanic airports. See also *History* below.

Education. According to government figures, illiteracy dropped from an estimated 65 per cent to less than 50 per cent in the last ten years. Of an estimated 4,500,000 children of school age, about 2,700,000 were in primary schools in 1937. In 1940 there were 39,650 primary schools, with 3,109,784 pupils; 718 secondary schools, with 143,289 pupils; 564 commercial schools, with 40,537 pupils; 153 industrial schools, with 14,540 pupils; 213 degree-conferring institutions, with 22,300 students. There is a national university in Rio de Janeiro and three private universities in Porto Alegre, Belo Horizonte and Curitiba. Roman Catholicism is the predominant religion.

Production. About 75 per cent of the working population is engaged in agriculture and stock-raising, 15 per cent in industry, and 10 per cent in trade, transport, etc. All goods produced in 1939 were valued at 27 billion milreis, of which industry accounted for about 12.5 billions (13.6 in 1940), agriculture 9, livestock 3, and minerals 1 billion. Brazil is the world's largest producer of coffee and normally ranks second in cacao, third in sugar and tobacco, and fourth in cotton. Coffee production was 20,850,000 bags (of 132 lb.) in 1940-41,

12,787,000 bags in 1941-42, and an estimated 14,000,000 bags in 1942-43. Between 1931 and Mar. 15, 1943, a total of 77,481,988 bags of coffee were destroyed in connection with the Government's price-maintenance program. Yields of other leading crops were: Lint cotton, 399,866 metric tons in 1941-42; cocoa beans, 1,808,035 bags (of 132 lb.) in 1942-43; cane sugar, 1,191,900 metric tons in 1940-41; maté, 186,231,000 lb. in 1941. Rubber output was less than 40,000 metric tons in 1943 and was expected to reach about 50,000 tons in 1944.

The approximate production of other crops was (in metric tons): Tobacco, 86,600; rice, 1,401,000; raw silk, 700; wheat, 150,000; corn, 6,000,000; potatoes, 334,000; beans, 798,000. Oranges, bananas, pineapples, grapes, and numerous other fruit are grown in quantity. Average yields of the chief forest products (in metric tons): Balata, 1,250; babassu nuts, 39,267 (exports in 1941); vegetable oils, 124,483 (1940); oil seeds, 117,495 (1940 exports); carnauba wax, 11,766 (1941 exports). Livestock in 1941 included 41,872,874 cattle, 23,521,666 swine, 5,850,801 goats, 6,709,310 horses, and 4,118,073 asses and mules. Meat production was 720,000 metric tons in 1941.

Mineral and metallurgical production in 1941 was (metric tons): Steel ingots and castings, 154,189; rolled steel products, 149,928; pig iron, 208,795; coal, 1,040,000; manganese ore (exports), 437,402; iron ore (metal content), 480,000 in 1940; salt, about 1,700,000 annually. A newly discovered oil field was under development in the State of Bahia. Output of the Itabira iron ore mines in 1943 was thrice that of 1942 as a result of the development program undertaken with U.S. aid (see 1943 Year Book, p. 88). Gold output (1941), 4,581,811 grams; diamonds, about 20,000 carats. The leading manufacturing industries are cotton weaving, sugar refining, flour milling, meat packing and the fabrication of machinery, paper, textile products, tobacco products. There were, in 1941, 825,425 industrial workers and 75,834 industrial establishments powered from 1,200 electric plants with a capacity of more than 1,100,000 kw. Also see *History* below.

Foreign Trade. Imports in 1942 totaled 4,644,000,000 cruzeiros (5,514,000,000 in 1941); exports, 7,495,000,000 (6,725,000,000 in 1941). The favorable trade balance rose from 1,211,000,000 cruzeiros in 1941 to 2,851,000,000 in 1942. This trend was due primarily to higher export prices. The average per-ton price of exports in 1942 was 2,818 cruzeiros (1,902 in 1941); of imports, 1,547 cruzeiros (1,361 in 1941).

Raw materials accounted for 40.6 per cent of the total export values in 1942 (48.3 in 1941); food-stuffs, 44.2 per cent (46.2 in 1941); manufactures, 14.9 per cent (5.5 in 1941). Coffee exports accounted for 40 per cent of the total export value in 1939, 30 per cent in 1941, and 16 per cent in 1942. Of the 1942 imports, the United States supplied 54 per cent by value (60.3 in 1941); Argentina, 17 (11.3); United Kingdom, 6 (5.7). Of Brazil's 1942 exports, the United States took about 46 per cent (56.9 in 1941); United Kingdom, 16 (12.2); Argentina, 13 (9.2).

Finance. Ordinary budget estimates of the national government for 1943 were: Receipts, 4,777,675,000 cruzeiros; expenditures, 5,270,160,789. In the extraordinary budget, receipts and expenditures balanced at 600,000,000 cruzeiros. The year 1942 closed with an actual deficit of 1,182,100,000 cruzeiros in the ordinary budget (revenues, 4,565,900,000; expenditures, 5,748,000,000). Extraordi-

nary revenues totaled 611,100,000 cruzeiros and expenditures 595,200,000.

The external bonded debt of the Federal, State, and municipal governments outstanding Dec. 31, 1942, was equivalent to about \$935,600,000 par value, distributed as follows (in millions): Dollar debt, \$305; sterling debt, £147.1; French debt, 520.3 paper and 229.2 gold francs; Dutch debt, 6.4 florins. On Nov. 1, 1942, the milreis was replaced as the unit of currency by the cruzeiro, equal in value to the milreis. Average exchange rates of the cruzeiro: Official rate, \$0.06058 in 1941 and 1942; free rate, \$0.05071 in 1941 and \$0.05143 in 1942.

Transportation. In 1943 there were about 21,242 miles of railway lines, over 129,100 miles of highways, 40,000 miles of navigable inland waterways, and an extensive network of air lines. With the nationalization of the former German-controlled air lines and discontinuance in 1942 of the Italian (LATI) transatlantic service, Pan American Airways remained the only international system operating in Brazil. The Brazilian army operates 9,000 route-miles of air lines to isolated points in the interior. Total air traffic statistics for 1941: Passengers, 99,662; baggage, 1,612 tons; express, 736 tons; mail, 233 tons. In 1941, 3,780 ships of 6,286,838 tons entered the port of Rio de Janeiro and 3,705 ships of 5,251,299 tons entered at Santos.

Government. The Constitution of Nov. 10, 1937, provided for the reorganization of Brazil along the lines of a corporative state (see YEAR BOOK, 1937, p. 102). However the Parliament and other governing institutions provided for in the Constitution were not established. President Getulio Dornelles Vargas continued to rule as a personal dictator, having dissolved all political parties. He became provisional President Nov. 3, 1930, after leading a successful military revolt. Under the Constitution of July 16, 1934, he was elected constitutional President the following day for a four-year term. The 1937 Constitution extended his term for six years from 1938. Subsequently his tenure of office was further extended pending a plebiscite, the date for which had not been announced up to the end of 1943. Members of the Cabinet at the beginning of 1943 were: Foreign Affairs, Oswaldo Aranha; Finance, A. de Souza Costa; War, Gen. Eurico G. Dutra; Marine, Adm. Henrique A. Guilhem; Transportation and Public Works, Gen. João de Mendonça Lima; Labor, Industry and Commerce, and Acting Minister of Interior and Justice, Dr. Alexandre Marcondes Filho; Agriculture, Dr. Apononio Salles; Education and Public Health, Dr. Gustavo Capanema; Aeronautics, Dr. Joaquim Pedro Salgado Filho. In September, 1942, João Alberto Lins Barros was appointed to the important new post of Coordinator of National Economy. For 1943 developments, see below.

HISTORY

Brazil at War. "Brazil's position is one of determination that nothing is too trifling or too great to give to attain victory," said President Vargas on the first anniversary of Brazil's entrance into the war. This attitude was reflected throughout 1943 in the vigor with which Brazil pressed forward with the mobilization of its military and economic resources in support of the United Nations.

Military Preparations. With the aid of substantial shipments of modern weapons and equipment supplied by the United States under lend-lease agreements, Brazil made rapid progress in the creation of a relatively small but up-to-date army, navy, and air force (see above under *Defense*). On Jan-

uary 9 military conscription was widened to include youths of 18 years of age and all naturalized citizens. The Brazilian navy and air force, joining forces with U.S. units based in Brazil, waged effective warfare against Axis submarines. In the year ended Aug. 22, 1943, Brazilian air units alone destroyed 13 subs to compensate for 124,000 tons of Brazilian shipping sunk by enemy action. Meanwhile War Minister Eurico Gaspar Dutra on July 1 began recruiting volunteers from 21 to 26 years of age for overseas service. Arrangements for the final training and shipment overseas of a volunteer force of at least two divisions were pushed forward with United States aid. An advance reconnaissance party of this expeditionary force arrived in Algiers in mid-December and began final battle training with French troops.

Roundup of Spies. The Government continued its efforts to root out Axis spies, saboteurs, and propagandists as well as to eliminate the activities of native fifth columnists. On February 10 it announced that a Nazi conspiracy to train Brazilian soldiers of German descent to assist an Axis invasion had been broken up four months before; Rio Grande do Sul authorities arrested about 130 army officers, soldiers, and civilians, including three Lutheran ministers. Santos police on February 20 accused the son of the former German consul there of plotting to sink British ships calling at the port by means of delayed-action bombs. A radio message intercepted by U.S. authorities led to the arrest and trial of Capt. Tulio Regis do Nascimento of the Brazilian Coast Artillery as alleged head of German espionage activities in Brazil. The prisoner had been scheduled to visit the United States with other Brazilian officers.

Trials of numerous other Axis spies and suspected conspirators continued before both military and civil courts during the year. Dr. Cauby de Araujo, president of Panair do Brazil, a subsidiary of Pan American Airways, was absolved on March 5 of the treason charges lodged against him in 1942. Four other defendants accused with him of conspiring to obtain Brazilian military secrets were each sentenced to 20 years imprisonment by the military court. One director and one reporter of the German Transocean news agency, which distributed German propaganda throughout Brazil prior to the republic's entrance into the war, were convicted of sedition and each sentenced to seven years' imprisonment on November 28.

On August 18 the police announced the breaking up of another large Axis spy ring, including both Germans and Japanese. Its leader, a German named Niels Christensen, was sentenced to 30 years' imprisonment by the National Security Tribunal October 7. Thirteen other members of the ring received sentences of 25 years or less. They were linked with a secret broadcasting station that transmitted data on ship departures and routes. It was revealed that the British liner *Queen Mary* narrowly escaped being sunk in the autumn of 1942 as a result of information supplied by the ring. Two other German leaders of an espionage organization with branches in the United States were sentenced to eight years at hard labor on August 30.

The presence of members of the Fascist Integralista movement among Axis espionage organizations led the Government to give semi-official support to the observance of Anti-Fascist Week the second week in May. Various anti-Fascist ceremonies were held to commemorate President Vargas's escape from assassination by Integralistas on May 11, 1938 (see 1938 YEAR BOOK). On

July 8 the police ordered all German and Japanese nationals and suspected Italians removed from the coast of São Paulo to the interior.

Early in October President Vargas decreed the liquidation of 34 German firms which were shown to have been controlled by the German Government through members of the Gestapo posing as employees. Two weeks later 45 additional Axis properties were ordered liquidated, including 25 Japanese properties. Among the latter was the Nippon Colonization Corporation, which Brazilians claimed was controlled by the Japanese Government and used to cloak Japanese plans and movements in the Amazon Valley. The Germans continued to hold the personnel of the Brazilian Embassy at Vichy, seeking to exchange them for German nationals convicted or accused of anti-Brazilian activities. However Brazil reportedly declined to release any Germans in this category. On November 24 the Government seized the Banco Hipotecario Agrícola, capitalized at \$1,000,000, which the press charged was German-controlled.

Economic Mobilization. Brazil's most valuable contribution to the United Nations war effort was in increasing the output of strategic materials for the war industries of the United States and Britain. Among these materials were rubber, bauxite, manganese, bismuth, beryllium, tin, iron, quartz, vegetable oils, hides, fibers, industrial diamonds, etc. The United States aided the expansion of production in these lines by technical and financial assistance, provided for by the series of economic accords concluded in 1941, 1942, and 1943 (see preceding YEAR BOOKS and below under U.S.-Brazilian Collaboration).

The entire economic mobilization program was directed by the Brazilian Coordinator of the National Economy. At his suggestion, President Vargas on April 17 issued a decree forbidding industrial workers to leave their jobs. Another decree of September 17 banned collective bargaining for the duration of the war and forbade workers to retard production in any way. The Coordinator also waged war upon hoarders and speculators in scarce commodities, whose activities contributed to the strong inflationary movement. On March 2 he established ceiling prices on all commodities at the Dec. 1, 1942, level. Finding it impractical to control prices without adequate enforcement machinery, the Coordinator in August decided to rely exclusively upon the expansion of production and better distribution to counteract inflation. The railways were required to give priority to the distribution of essential commodities.

Twenty-two basic raw materials were placed under strict Government control in May to balk hoarders and profiteers. Imports were restricted to essential supplies. Cocoa production and export was nationalized May 22. Rationing of sugar, butter, and bread was introduced. Agreements were made with the textile mills and other producers of staples to provide for the needs of the poorer classes at low prices. As the shipping situation improved, there were increasing arrivals of essential supplies from abroad. Yet the rise in prices continued unabated, spurred on by an unprecedented boom in the construction of housing and industrial plants. Higher taxes on incomes, dividends, and excess profits were provided for in the 1944 tax bill signed by President Vargas on September 24.

A favorable result of the economic boom was the marked increase in Brazil's gold and exchange reserves and improvement in its budgetary position. It was revealed in June that Brazilian pur-

chases of U.S. gold under the Stabilization Agreement of 1942 had exceeded the \$100,000,000 limit. Consequently the U.S. and Brazilian Treasuries agreed upon a new ceiling of \$200,000,000. Brazil's improved financial status enabled the Government to begin negotiations for increased payments on its external debt. The existing 1940 debt-payment accord was due to expire Mar. 31, 1944. On November 25 the Government undertook to service outstanding dollar and sterling bonds at rates reducing the original charges from about \$100,000,000 to about \$30,000,000 annually. The plan called for the repayment of the Brazilian foreign debt in 23 years at a saving of 37 per cent as compared with the original terms of the outstanding loans.

Rubber Campaign. The joint U.S.-Brazilian program for the expansion of rubber production in the Amazon Basin (see 1943 YEAR BOOK, p. 89) encountered difficulties in 1943 and the output was well under the scheduled total of 50,000 tons. The shortage of river vessels and planes to transport men and supplies into the rubber regions and to export the rubber delayed Coordinator de Barros' plans for rushing 50,000 rubber gatherers into the interior. However 8,000 men had been transported from drought-stricken regions of northeastern Brazil to the rubber areas by the end of May. The arrival of the needed ships and planes from the United States later in the year overcame most of the original handicaps. Plans called for increasing production of rubber to some 50,000 tons in 1944 and to a maximum of 70,000 tons the following year.

Meanwhile work was rushed on new airports, docks, trails, camps, and health and sanitation projects designed to facilitate the task of the rubber gatherers. In mid-July a Brazilian expedition set out from Leopoldina, State of Goyaz, to survey the virtually unexplored regions of the Rio dos Mortes and Rio Xingú for new sources of rubber and to establish a colonization center on the Rio dos Mortes. Army engineers were at work on a 1,000-mile highway linking the city of São Paulo with Cuiabá, capital of Mato Grosso.

Under the general direction of Dr. George M. Saunders of the Institute of Inter-American Affairs at Washington, a staff of some 1,500 Brazilian doctors, nurses, and technicians were working on a health and sanitation program designed to overcome malaria and other scourges of the Amazon region. By August, 1943, some 20 dispensary infirmaries were in operation, including hospital launches that regularly visited outlying settlements and camps. Five major hospitals and some 50 infirmaries (35 floating) were expected to be in operation at strategic points along the great river system by the end of 1943. A million atabrine tablets were being distributed free of charge each month. In one district, this measure reduced the incidence of malaria from 15 to less than 3 per cent of the population. In districts of the lower Amazon where rubber was being harvested, 500 men were at work on a mosquito-prevention program. Under a new Brazilian-United States sanitation and health agreement signed late in 1943, Brazil undertook to spend \$5,000,000 and the United States \$3,000,000 to improve health conditions in the Amazon and Rio Doce valleys as part of the rubber program.

A Brazilian-American Food Commission, established under the agreement signed Sept. 3, 1942, in Rio de Janeiro, provided machinery, equipment, and expert advice for the expansion of vegetable and meat production in the Amazon basin to sup-

port the growing population. Up to the end of August, 1943, this commission had distributed 760 tractors, 1,300 ant exterminators, 10,500 hoes, and seeds and insecticides. Another U.S.-Brazilian agreement concluded in April, 1943, provided for the establishment of stores to distribute foodstuffs and equipment to rubber workers, who were being exploited by private traders. A predominant share of the cost of the entire rubber development program was borne by the United States.

Other U.S.-Brazilian Relations. Returning home by air from the Casablanca Conference, President Roosevelt stopped over at Natal for an important conference with President Vargas on January 28-29. According to a joint statement and a joint declaration issued by the two Presidents they (1) discussed the Casablanca conference and the future safety of the Americas, (2) agreed that the coast of West Africa and Dakar should "never again under any circumstances be allowed to become" an invasion threat to the two Americas, (3) declared their common aim "to make the Atlantic Ocean safe for all," and (4) expressed themselves as "deeply grateful" for the "almost unanimous" help which their neighbor nations were giving "to the great cause of democracy." The latter allusion was a pointed reference to the uncooperative attitude of Argentina. An immediate result of the Vargas-Roosevelt meeting was the Brazilian Government's formal adherence on February 6 to the Declaration of the United Nations and to the Atlantic Charter.

New U.S. Credits. Warren Lee Pierson, head of the Export-Import Bank, announced on March 15 that the Bank's total credits to Brazil amounted to \$150,000,000. Three days later he signed two agreements in Rio de Janeiro granting (1) an additional credit of \$14,000,000 to the Rio Doce Corporation for the exploitation of the Itabira iron deposits, and (2) an additional credit of \$20,000,000 to the Brazilian Government for construction of the big Volta Redonda steel plant. Following upon similar accords signed in 1942 (see 1943 YEAR BOOK), these agreements raised the total credits granted the Rio Doce Corporation to \$28,000,000 and the Volta Redonda project to \$45,000,000. Repayment of the \$14,000,000 Rio Doce credit was to be made within 25 years, 15 per cent of Itabira iron ore prices f.o.b. Victoria being segregated for that purpose. A contract for double-tracking and improving the Victoria-Minas Railway tapping the Itabira mines was let to a U.S. construction company on October 9.

Lend-lease materials and services supplied to Brazil were in addition to the Export-Import Bank credits. Besides equipment for the army and air force, a number of submarine chasers were delivered to the Brazilian navy during the year. Beginning in May, 120 Brazilian youths were sent to the United States monthly for air training. As a reciprocal gesture, President Vargas on October 20 delivered 400,000 bags of coffee, valued at more than \$5,000,000, as a gift from the Brazilian people to the U.S. armed services.

In 1942 the U.S. Commodity Credit Corporation had contracted to buy the entire unshipped surplus of Brazil's 1942-43 quota for coffee sales to the United States. The Commodity Credit Corporation also undertook to buy 1,300,000 bags of Brazil's 1942-43 cocoa crop, the entire exportable surplus of babassu kernels and oil for two years, and 200,000 long tons of castor seed and oil in 1942-43. These agreements, combined with the high prices paid by the U.S. Government for Brazil's strategic materials, were largely responsible

for the country's prosperity during the year 1943.

On December 21 the U.S. and British Governments contracted to purchase Brazil's exportable rice surpluses for 1944 and 1945. The United States also agreed to buy Brazil's pyrethrum surplus for two years.

Other Foreign Relations. The profitable nature of Brazil's cooperation with the United States and the political interests and natural inclinations of its people made for the closest sort of American-Brazilian collaboration. By a series of diplomatic moves the Vargas Government gave more or less open support to Washington's policies with respect to Argentina, France, Portugal, and Spain. President Vargas received official visits from President Morinigo of Paraguay early in May and President Peñaranda of Bolivia late in June. Extending the Brazilian policy of forging closer economic links with these neighboring states, important new accords were signed with both visitors (see BOLIVIA and PARAGUAY under *History* for details). Free port privileges at Santos were granted both countries. The military and industrial development being made by Brazil, with U.S. aid aroused some misgivings in Argentina (which see). As a result of its war association with the United Nations, the Brazilian Government during 1943 adopted a much more liberal attitude toward Communist Russia, although remaining hostile to Brazilian communism.

Internal Politics. President Vargas's support of the democratic cause in the war was reflected also in the resurgence of liberal elements in Brazilian politics. Pro-Axis figures were weeded out of im-



Courtesy of The Inter-American

BRAZIL'S NEW TERRITORIES

The five Federal Territories of Amapá, Rio Branco, Guaporé, Ponta Pora, and Iguassú were created in September, 1943. Acre Territory was previously in existence

important political offices. On April 19 Vargas pardoned his old enemy, former Governor José Antonio Flores da Cunha of Rio Grande do Sul, who had been imprisoned since his voluntary return from exile following Brazil's entrance into the war. The holding of Anti-Fascist Week in May was another indication of the new trend. Foreign Minister Aranha and other leading members of the Varga-

regime took part in the increasing activities of the prodemocratic "Friends of America" movement.

On September 7 President Vargas hinted that he intended to modify the temporary dictatorship through which he had ruled the country since 1937. A week later he decreed the creation of five new Territories to promote economic development of frontier regions and to serve as buffers between Brazil and adjoining republics. The new Territories abutted upon Argentina, Paraguay, Bolivia, Venezuela, and Dutch and French Guiana, respectively (see outline map). They were carved out of existing States and placed under the direct administration of the President, acting through military interventors (governors). All State and municipal properties within the new Territories passed into the hands of the Federal Government.

In a speech on the sixth anniversary of his 1937 coup d'état of 1937, President Vargas on November 10 promised a "readjustment of our political structure" after the war. However he said the new structure would leave no room for the "professional politicians." The Brazilian Economic Convention, in session in Rio de Janeiro during November 25-December 18, recommended the establishment of the Ministry of National Economy called for in the 1937 constitution but never created.

See ARGENTINA and BOLIVIA under *History*; BANKS and BANKING; CHEMISTRY under *Foreign*; JUVENILE DELINQUENCY; NATIONAL BUREAU OF STANDARDS; NAVAL PROGRESS; WORLD WAR.

RONALD STUART KAIN.

BRENNER PASS. See TUNNELS.

BRETHREN, German Baptist (Dunkers or Dunkards). A religious organization founded in Schwarzenau, Germany, in 1708 by a group of Pietists and established in Germantown, Pa., in 1719 under the leadership of Peter Becker. There are four denominations of Brethren in the United States, the largest and oldest group being the Church of the Brethren, or Conservative Dunkers, with headquarters at Elgin, Ill. For statistics, see RELIGIOUS ORGANIZATIONS.

BRICK. See BUILDING MATERIALS.

BRIDGES. Research work and studies in bridge design have been continued in spite of war conditions. Tests with heavy steam and electric locomotives indicate that the additional stresses caused by impact of heavily loaded wheels striking slight irregularities in the track on bridges are much lower than had been calculated, especially on bridges having the modern type of ballasted floor. For the design of the 2,800-ft. suspension bridge over the Narrows at Tacoma, Wash., to replace the one destroyed by a wind storm in 1940, a committee of engineers is studying the problems involved and will test (directly and by models) the effects of high winds on other large suspension bridges.

Suspension Bridges. The Peace River bridge on the Alaska Highway, opened on August 30, has a main span of 930 ft. and two backstay spans of 465 ft. Foundations and erection of the steel towers were carried on rapidly during the severe winter by working on the ice, $4\frac{1}{2}$ ft. thick, this part of the structure being completed six days before the ice went out in the spring. The new Tacoma Bridge, noted above, must wait until after the war, but some 4,000 tons of wire and 4,000 tons of structural steel have been salvaged in demolishing the old cables and towers. At the San Francisco-Oak-

land Bridge, a small one-man Navy airplane, in a fog, flew across one of the suspension spans, breaking a vertical suspender cable. With its wings sheared off the plane and its pilot were lost in the bay.

Steel Bridges. The American Institute of Steel Construction has discontinued until after the war its annual awards for the most beautiful bridges of the year. Two Mississippi River projects are still in abeyance. For the highway bridge at Memphis, Tenn. (authorized by Congress in 1939), the Memphis & Arkansas Bridge Commission has asked assistance of the U.S. Public Roads Administration in designing and financing. Authority for a bridge from Helena, Ark., to Friar's Point, Miss., had expired under time limits, but Congress extended the life of the project.

At Baltimore, a bridge about a mile long over the Patapsco River is planned as part of an 8-lane express highway through the city, forming a link in the Atlantic States Superhighway. A bridge over the Thames River between New London and Groton, Conn., opened in February, has a cantilever channel span of 540 ft., with anchor arm spans of 352 ft. It carries two 24-ft. roadways, a $2\frac{1}{2}$ -ft. dividing strip, and two 4-ft. walks. A high-level bridge over the Norfolk River at Henderson, Ark., must replace the present bridge, which will be submerged in the reservoir formed by the Norfolk Dam. Foundations must be built before the water level rises.

Timber Bridges. War restrictions on the use of steel have led to an increasing use of timber truss bridges and timber trestles, composed largely of treated timbers. Interesting features are the use of concrete and bituminous paving on the wood floors of trestles, and the use of plywood and built-up members in trusses, these members being composed of pieces glued together, and sometimes shaped and bored before the preservative treatment. A Pennsylvania highway bridge, designed for 30-ton loads, has six such truss spans of 130 ft. Numerous truss bridges of 35-ft. to 125-ft. span, built on the Pan-American highway by the United States government, are composed of members shaped and bored before treatment and shipped in bundles ready for erection at their sites.

Covered wood truss bridges, frequent in pioneer days, especially in New England and the Mid-West, are becoming rare, as heavy traffic and loads require their replacement. A few are being preserved as examples of early engineering works. At Rushville, Ind., the old Howe-truss Flatrock bridge, with two spans of 123 ft., has been replaced by a concrete arch structure alongside; but by request of the Indiana Historical Society the old structure was left in place and a roadside park developed around it.

Concrete Bridges. An arch of 886-ft. span, in the Sando Bridge, Sweden, opened early in 1943, is claimed as the longest concrete arch yet built. It carries a highway across the Angerman River and eliminates the last ferry crossing on the main road from Stockholm to Haparanda, at the head of the Gulf of Bothnia. The road is 131 ft. above the water. In the United States, concrete trestles, bridges, and culverts are numerous, but few are notable or conspicuous. Restrictions on the use of reinforcing steel have led to modified designs with more massive plain concrete. At Los Angeles, there was completed the Aliso Street viaduct, having a 6-rib arch span of 222 ft. over the Los Angeles River, together with 80-ft. box girder spans and girder spans of 40 ft. In all it is 1,808 ft. long, and carries two 2-lane roadways with an electric rail-

way between them and two 4-ft. sidewalks. It forms a link in the city's express highway system.

Toll Bridges. Loss of tolls through severe restrictions on traffic is affecting the finances of toll bridge concerns. The Triborough Bridge Authority of New York City has faced trouble in paying interest on bonds on account of the decline in traffic. At San Francisco, the authorities in charge of the Golden Gate suspension bridge have asked the State to take over operation and maintenance, since the income suffers not only by decline of traffic but also from the large amount of free traffic by employees of the Federal Government. The State of Pennsylvania has planned to free its last toll bridges, about 12 in all.

In Florida, the State Highway Department proposes to acquire and operate free of tolls the Gandy and Davis toll roads and bridges, and to ask the Federal Government to pay half the cost. The Gandy structure, five miles in length, crossing Tampa Bay between Tampa and St. Petersburg, has 50 per cent of its length composed of a concrete trestle with 24-ft. spans, and the remainder a solid embankment. The Davis structure, crossing the bay between Tampa and Clearwater, 9¼ miles, is mainly an embankment or causeway, with less than a mile of bridge, consisting of treated timber piles supporting 20-ft. composite spans of laminated timber and concrete. Each bridge has a bascule span over a navigation channel. A high-level free bridge across the Rio Grande between Laredo, Tex., and Nuevo Laredo, Mexico, is proposed by the Texas State highway department to supersede the private low-level toll bridge.

Ponton Bridges. Such bridges are used mainly in military operations, and those in civil use are generally small. A bridge to an island shipbuilding yard in Lake Ontario has a 65-ft. ponton draw span carried by four floats or pontoons at each end. To open the bridge, the floats are emptied or blown out by compressed air, so that their buoyancy lifts the span from its end bearings, and it is then swung clear of the channel by tackle operated by hand. At Brookfield, Vt., a State road has a ponton bridge 294 ft. long, carried by 380 oak barrels supporting lines of chains laid lengthwise. Transverse members between the barrels and seated on the chains carry timber stringers on which is the plank deck or floor. The Corps of Engineers, U.S. Army, has adopted the term "ponton" in preference to the older term "pontoon."

Movable Bridges. A remarkable bridge of this type, which is lowered 20 ft. under water to allow vessels to pass, was built in Iraq by engineers of the British army, to the designs of Gen. C. Gifford Hull. It is 92 ft. long, weighing 35 tons, and has a roadway and railway track on a deck 15 ft. wide. It was intended to have counterbalance weights riding in wells formed by sheet piling, so that no conspicuous tall towers would be required. But as the wells were not plumb, towers had to be built for the sheaves carrying the operating cables, which are worked by hand hoists or winches. The ends of the span rest on beams which are pushed back when it is to be lowered. The same principle has been applied to lock gates in the United States.

In general, movable bridges or draw spans have not been much in evidence, but as the result of some serious accidents study has been given to the design of adequate fenders to protect the towers of both movable and fixed spans over navigable channels from injury by vessels which may be out of control. A bridge on the railway between Puerto Mexico and Campeche, in Mexico, crosses the Tancochapa River by a 63-ft. swing span pivoted

at one end; the other end (except when closed and resting on its pier) is supported by rods from a tower 50 ft. high. It is swung by cables leading to hand hoists or winches.

Bridge Work. Novel methods in bridge construction, repair, and salvaging have been conspicuous. Two bridges over the Tennessee River had to be raised 14 and 25 ft. on account of the reservoir formed by the new Gilbertville Dam. With 200-ton cranes and 300-ton jacks the spans were raised gradually, concrete blocks being placed to build up the piers to the new level. At Columbus, Colo., a bridge having six 30-ft. girder spans on piers or bents of steel piles has its concrete deck only 4½ ft. above low water, as the old bridge was dilapidated and material for a high-level structure was not obtainable. The concrete roadway slab is anchored to the crossbeams of the piers for security during floods. Of 735 tons of steel in a viaduct crossing Little Jackfish River, Canadian National Railways, only 45 tons were new metal, the remainder having been reclaimed from old bridges. And at Lynchburg, Va., two old railway truss bridges were dismantled and the material used to form three highway bridges. Steel and timber bridges that would have been submerged in the reservoir formed by the Grand Coulee Dam on the Columbia River were salvaged by placing barges under them, pumping out the barges so as to lift the spans from their supports, and then towing the barges with the spans to sites convenient for dismantling them.

Replacement of old highway bridges that are not fitted for modern traffic and loads will be an important item in postwar reconstruction, and will help to replenish the scrap stock piles. Several old bridges, both steel and concrete, have been demolished by army engineer forces as part of their training for war work. Such training includes not only demolition but also rapid construction and emergency restoration of bridges demolished by a retreating enemy.

Foreign Bridges. For an international bridge at Tia Juana the Mexican government is to pay 25 per cent and the city 75 per cent. The great Howrah cantilever bridge over the Hooghly at Calcutta, opened in 1943, has a channel span of 1,500 ft., with anchor or shore arms of 325 ft. The floor, suspended from the bottom chords of the trusses, is reached by spiral ramps which come to the floor level at the piers.

In Spain, a concrete bridge over the Agueda River near Fuentes d'Onoro, opened in April, has three 270-ft. arches 50 ft. high. It replaces a structure that failed Dec. 21, 1942.

The proposed Danube bridge between Giurgevo (Rumania) and Russe (Bulgaria) was approved by a joint government commission in June, work to begin in 1943 and be finished by 1948. It will carry a railway, roadway, and sidewalks. At Belgrade, a suspension bridge has been completed over the Danube to replace the structure destroyed in 1941 by retreating Yugoslavian troops. Still another Danube bridge was opened in March, near Medve, Hungary, on an express highway. It has four main spans, with a channel span of 1,968 ft. In Denmark, the Queen Alexandrine bridge connecting roads in Zealand and Moen Island, was opened May 30. It is of steel and concrete, 2,440 ft. long. A bridge between Zealand and Funen Island is planned, to replace the Korsor-Nyborg railway car-ferry. There is a project also for a bridge between Denmark and Sweden at this point. A highway bridge over the Firth of Forth, just west of the great railway Forth Bridge, is proposed as

important for the development of Scotland. Of historical interest is the preservation of a 17th century stone arch bridge over the Derwent River in England, the bridge being on a pack-horse track or road, which will be submerged in a new reservoir. The bridge was dismantled carefully and all stones were marked for erection at some new site after the war. See FOUNDATIONS.

E. E. RUSSELL TRATMAN.

BRITISH CAMEROONS. See CAMEROONS, BRITISH.

BRITISH COLUMBIA. A province of Canada, bounded on the west by the Pacific Ocean and Alaska. Area, 366,255 square miles (including 6,976 sq. mi. of fresh water). Population (1941 census), 817,861 (435,031 male; 382,830 female). The racial origin of the population (1941 census) included 571,336 British, 41,560 Scandinavian, 24,882 Indian and Eskimo, 22,407 German, 22,096 Japanese, 21,876 French, and 18,619 Chinese. Religious membership (1941 census): Anglican 245,531, United Church 200,817, Roman Catholic 113,282, Presbyterian 94,300, Lutheran 41,772, Baptist 29,780, Confucian 29,137. Chief cities: Victoria (capital) 44,068 inhabitants in 1941, Vancouver 275,353, New Westminster 21,967, Trail 9,392, North Vancouver 8,914, Prince Rupert 6,714, Nanaimo 6,635, Kamloops 5,959, Nelson 5,912, Vernon 5,209, Kelowna 5,118. In 1942 there were 16,798 live births, 8,860 deaths, and 10,828 marriages. Education (1941-42): 165,480 students enrolled in schools and colleges.

Production. The gross value of agricultural output for 1942 amounted to \$62,529,000 (field crops accounted for \$18,137,000, fruits and vegetables \$15,212,000, milk \$9,974,000, farm animals \$9,324,000, poultry and eggs \$8,806,000). Chief field crops (1942): wheat 2,579,000 bu., oats 3,819,000 bu., potatoes 75,500 tons, turnips, etc. 39,800 tons, hay 484,000 tons, alfalfa 221,000 tons. Livestock (June 1, 1943): 376,000 cattle (inc. 93,700 milk cows), 132,000 sheep, 89,800 swine, 62,170 horses, 3,561,600 hens and chickens. Apple crop (1942): 1,816,700 bbl. valued at \$6,267,500. Fur output (1941-42): 838,750 pelts valued at \$1,655,137.

The net value of production in the lumber industry for 1941 was \$39,571,627. Pulp and paper output (1942): \$16,426,441 was the net value of products. Fisheries catch (1942) was valued at \$38,059,559. The salmon pack (1942) totaled 1,806,009 cases (of 48 lb. each). Mineral output (1942): \$76,665,268 (copper, zinc, etc. accounted for \$35,215,018, gold \$18,104,779, silver \$4,409,356, coal \$7,500,988). Manufacturing (1941): 1,905 plants, 62,447 employees, \$89,256,478 for wages, \$219,755,738 for cost of materials, \$181,232,637 was the net value of production.

Government. Finance (year ended Mar. 31, 1942): revenue \$38,763,546; expenditure \$31,342,923; total direct and indirect liabilities (less sinking funds) \$159,143,632. The executive power is vested in a lieutenant governor who is advised by a ministry of the Legislative Assembly, the latter consisting of 48 members elected for a five-year term by adult suffrage (21 Liberals, 14 Cooperative Commonwealth Federationists, 12 Conservatives, and 1 Laborite were elected at the provincial general election of Oct. 21, 1941). Six Senators (appointed for life) and 16 elected commoners represent British Columbia in the Federal Parliament at Ottawa. Lieutenant Governor, Lt. Col. William C. Woodward (appointed Dec. 10, 1941); Premier, John Hart (Liberal). See ALASKA and CANADA under History.

BRITISH EAST AFRICA. See KENYA, NYASALAND, TANGANYIKA TERRITORY, UGANDA, ZANZIBAR.

BRITISH EMPIRE. The world's largest empire, comprising an area of 13,353,952 square miles and a population of about 500,775,000. It consists of:

1. The United Kingdom of Great Britain and Northern Ireland. See GREAT BRITAIN; IRELAND, NORTHERN.

2. Self-governing Dominions—AUSTRALIA, CANADA, NEWFOUNDLAND (temporarily administered by a Governor in Commission, responsible to the Crown through the British Secretary for Dominion Affairs), NEW ZEALAND, UNION OF SOUTH AFRICA.

3. EIRE (IRELAND), a sovereign, independent state, associated for certain purposes with the United Kingdom and the self-governing dominions, which are sometimes referred to collectively as the British Commonwealth of Nations.

4. INDIA and BURMA.

5. Self-governing colonies—CEYLON and SOUTHERN RHODESIA.

6. Crown colonies and protectorates—ADEN, BAHAMAS, BARBADOS, BASUTOLAND, BECHUANALAND, BERMUDA, BRITISH GUIANA, BRITISH HONDURAS, BRITISH SOLOMON ISLANDS, BRITISH SOMALILAND, CYPRUS, DOMINICA, FALKLAND ISLANDS, FIJI, GAMBIA, GILBERT AND ELLICE ISLANDS, GIBRALTAR, GOLD COAST, GRENADA, HONG KONG, JAMAICA, KENYA, LEEWARD ISLANDS, MALTA, MAURITIUS, NIGERIA, NORTHERN RHODESIA, NYASALAND, St. HELENA, St. LUCIA, St. VINCENT, SEYCHELLES, SIERRA LEONE, STRAITS SETTLEMENTS, SWAZILAND, TRINIDAD AND TOBAGO, UGANDA, ZANZIBAR.

7. Protectorates of a special nature—BRITISH NORTH BORNEO, BRUNEI, FEDERATED MALAY STATES, SARAWAK, UNFEDERATED MALAY STATES—collectively known as BRITISH MALAYA. Also TONGA.

8. Mandates held by the United Kingdom—BRITISH CAMEROONS, PALESTINE, TANGANYIKA TERRITORY, TRANS-JORDAN, TOGOLAND (British sphere).

9. Mandates held by Dominions—NAURU (Australia), NEW GUINEA (Australia), SOUTH-WEST AFRICA (Union of South Africa), WESTERN SAMOA (New Zealand).

10. Dependencies of Dominions—LABRADOR (Newfoundland); ASHMORE AND CARTIER ISLANDS, PAPUA, NORFOLK ISLAND, AUSTRALIAN ANTARCTIC TERRITORY (Australia); UNION ISLANDS OF TOKELAU and Ross Dependency (New Zealand).

11. Territories held under condominium—ANGLO-EGYPTIAN SUDAN (United Kingdom and Egypt), NEW HEBRIDES (United Kingdom and France), CANTON and ENDERBURY ISLANDS (United Kingdom and United States).

See the separate articles covering most of the above territories. British North Borneo, Brunei, Federated Malay States, Sarawak, Straits Settlements, and Unfederated Malay States are dealt with under BRITISH MALAYA, and Dominica, Grenada, St. Lucia, and St. Vincent under WINDWARD ISLANDS.

Between the outbreak of World War II in 1939 and the end of 1943, British forces obtained military control over the FAEROES, ICELAND (later turned over to United States forces), ETHIOPIA (returned to Emperor Haile Selassie), ERITREA, ITALIAN SOMALILAND, LIBYA, Iraq, part of IRAN, and MADAGASCAR, FRENCH SOMALILAND, and SYRIA and LEBANON (the three latter in association with the Fighting French).

Japanese forces during 1941-42 occupied the following parts of the British Empire: BRITISH MALAYA, BRITISH SOLOMON ISLANDS, BURMA, HONG KONG, the Territory of NEW GUINEA, ANDAMAN IS-

LANDS, and some of the GILBERT AND ELLICE ISLANDS. Final disposition of many of these occupied territories awaited the outcome of the war. See the article on each country, colony, or dependency mentioned, under *History*; also GREAT BRITAIN under *History*; WORLD WAR.

BRITISH GUIANA. A British colony on the northern coast of South America. Area, 89,480 square miles. Population (1941 estimate), 354,219 including 152,460 East Indians. Vital statistics (1941): 12,530 births, and 5,517 deaths. Chief towns: Georgetown (capital) 71,160 inhabitants, New Amsterdam 9,665, Springlands, Morawhanna, Bartica. Education (1941): 57,705 pupils enrolled in schools receiving government grants.

Production and Trade. The area under cultivation amounts to some 155,000 acres, from which the principal products are sugar (191,767 tons, 1942), rice (51,060 tons, 1941), coconuts, coffee, cacao, limes, citrus fruits, maize, rubber, plantains, and fibers. Livestock (1941): 140,924 cattle, 33,773 sheep, 22,889 swine, 12,146 goats, 6,394 donkeys, and 2,974 horses. The forests cover an area of 78,000 square miles and produce such timbers as greenheart, kakeralli, morabukea, purple heart, and wallaba. In 1941 the exports of balata totaled 659,190 lb. Bauxite, diamonds and gold are the chief mineral exports. Manganese ore and mica have been found. Trade (1942): imports \$17,250,000 (\$14,433,856 in 1941); exports \$18,500,000 (\$16,211,698). Foodstuffs, textiles, clothing, and machinery were the main imports.

Communications. Railways 79 miles, river transport 472 miles, canals 39 miles, highways 881 miles. Georgetown, British Guiana, is a port of call in the Miami, Florida, to South America air service. Shipping (1941): 3,261 vessels aggregating 2,381,689 tons entered and cleared.

Government. Budget estimates (1942): revenue £1,611,328; expenditure £1,640,425. The funded public debt, Dec. 31, 1941, amounted to £4,254,737. Administrative and executive functions are in the hands of the Governor and the Executive Council. The new constitution which came into force on Apr. 12, 1943, provides for a reconstituted Legislative Council of 24 members—14 elected, 7 nominated, and 3 official—with the Governor as president. United States landplane and seaplane bases were established on leased sites in British Guiana (see 1942 YEAR BOOK, p. 81). Governor, Sir Gordon Lethem (appointed July 4, 1941).

BRITISH HONDURAS. A British crown colony in Central America. Area, 8,598 square miles. Population (Jan. 1, 1942 estimate), 61,068. Vital statistics for 1941 (rate per 1,000): births 34.9; deaths 16.8. There were 421 marriages. Education (1940): 11,208 students enrolled in schools of all kinds. Chief towns: Belize, the capital, 16,687 inhabitants (1931); Corozal, 2,700; Benque Viejo; El Cayo; Baranco.

Production and Trade. Mahogany, chicle (the basis of chewing gum), bananas, grapefruit, cedar logs, coconuts, and copra were the main products. The forests (8,007 sq. mi.) produce about 80 per cent of the exports by value. Trade (1941): imports \$3,751,950; exports \$3,357,546. The United States supplied 35.8 per cent of the imports and received 70.2 per cent of the exports. Shipping (1941): 147,460 tons entered. A twice-weekly air service for mails, passengers, and express was in operation to and from San Pedro Sula, Honduras. Roads: 221 miles.

Government. Finance (1941): revenue \$1,370,-

900; expenditure \$1,378,000. Public debt (Dec. 31, 1943), \$2,500,105. The executive branch of the Government rests with the Governor, assisted by an Executive Council. The Legislative Council includes the Governor as president, 5 official members, and 8 unofficial members (2 nominated and 6 elected). Governor and Commander in Chief, Sir John Adams Hunter (appointed Nov. 18, 1939).

See HURRICANES.

BRITISH MALAYA. The British possessions and dependencies in Malaya, conquered by the Japanese in 1941 and 1942. Their areas, latest populations, and capitals, are shown in the accompanying table.

<i>Division (Capital)</i>	<i>Sq. mi.</i>	<i>Population</i>
British North Borneo (Sandakan)....	29,500	302,000
Brunei (Brunei).....	2,226	39,000
Federated Malay St. (Kuala Lumpur).....	27,540	2,212,052
Negri Sembilan (Seremban).....	2,580	296,009
Pahang (Pekan).....	13,820	221,800
Perak (Taiping).....	7,980	992,691
Selangor (Kuala Lumpur).....	3,160	701,552
Sarawak (Kuching).....	50,000	490,585
Straits Settlements (Singapore).....	1,356	1,435,895
Labuan (Victoria).....	35	8,963
Malacca (Malacca).....	640	236,087
Penang (George Town).....	390	419,047
Singapore (Singapore).....	291	771,798
Unfederated Malay States.....	22,276	1,912,497
Johore (Johore Bahru).....	7,500	737,590
Kedah (Alor Star).....	3,660	515,758
Kelantan (Kota Bharu).....	5,750	390,332
Perlis (Kangar).....	316	57,776
Trengganu (Kuala Trengganu).....	5,050	211,041

* Includes Dindings. * Includes Province Wellesley (280 sq. mi.; pop. 171,587; chief town Butterworth). * Includes Christmas Island (60 sq. mi.; pop. 1,440) and Cocos (Keeling) Islands (9 sq. mi.; pop. 1,142).

The combined population of the Federated Malay States, Straits Settlements, and the Unfederated Malay States at the end of 1939 was 5,444,833, including 2,332,058 Chinese, 2,259,331 Malays, 744,283 Indians, 30,319 Europeans (including the military which was later increased), and 19,046 Eurasians. Chief cities (with latest available population figures): Singapore, 750,805; George Town, 165,411; Kuala Lumpur, 138,425; Johore Bahru, 97,634; Ipoh, 64,343; Malacca, 45,010; Taiping, 38,719; Seremban, 27,839; Klang, 27,948; Alor Star, 25,000; Kuching, 30,000; Kuala Trengganu, 16,000; Kota Bharu, 14,843; Sandakan, 13,826; Brunei, 12,000.

Production. The chief products in 1940 were rubber (603,600 long tons, including that of Brunei, Sarawak, and British North Borneo), tin ore (metal content, 86,800 metric tons), copra, rice, palm oil (57,972 tons), palm kernels (10,172 tons), iron, tea, and pineapples. Other products—sugar, areca nuts, timber, resin, phosphate, manganese, bauxite, scheelite, wolframite, and amang ore. During December, 1940, the area of tapped rubber trees was 1,632,136 acres; the area under rice, the main food crop, 793,340 acres. Excluding Brunei, Sarawak and British North Borneo, rice production in 1939-40 was 526,300 metric tons.

Trade. Federated Malay States, Straits Settlements, and Unfederated Malay States (1940): imports \$830,255,000; exports \$81,128,169,000. Exports of Malayan produce to the United States were valued at \$591,931,000, an increase of 84 per cent over 1939. Imports from the United States totaled \$38,037,000, an increase of 107.8 per cent. Gross exports of rubber, including reexports of 234,319 long tons from nearby countries, amounted to 772,767 long tons valued at \$629,598,000 (an advance of 68 per cent by value over 1939). Exports of tin during 1940, including reexports, amounted to 130,935 long tons.

Finance. Federated Malay States (1941 estimates, excluding war taxation and expenditure): revenue S\$77,500,000; expenditure S\$72,000,000. Straits Settlements budget (1941): revenue S\$46,294,000; expenditure S\$57,292,000. Unfederated Malay States (1940): revenue S\$30,642,791; expenditure S\$28,369,074. British North Borneo, Brunei, and Sarawak (actual 1939 figures): revenue S\$9,608,752; expenditure S\$7,324,443. The average annual exchange value in United States funds for the Straits dollar (S\$) was \$0.5174 for 1939; \$0.4698, 1940; \$0.4713, 1941.

Communications. Previous to the Japanese occupation, Singapore was one of the world's leading ports, as well as the chief British naval base and administrative center in the Far East. During January–September, 1939, the net tonnage of shipping cleared from Malayan ports was 26,095,400, the bulk of it from Singapore. Railways connected Singapore with the productive parts of the Malay Peninsula and with Thailand. There were 7,873 miles of roads in 1940, and air lines extending to the principal cities of Asia and Australasia.

Government. Under the British administration, the Governor of the Straits Settlements also served as High Commissioner for the Federated and Unfederated Malay States and Brunei and as Agent for British North Borneo and Sarawak. The Straits Settlements constituted a crown colony; it was administered by the Governor with the aid of executive and legislative councils. The other Malay States were all protectorates with different degrees of British control. British Residents advised the rulers of each of the Federated and Unfederated Malay States. The Federated Malay States had, in addition, a Federal Council and their policy in Federal matters was coordinated by the High Commissioner through the Federal Secretary. British North Borneo was administered by the British North Borneo Company under a royal charter. The Sultan of Brunei in 1906 agreed to place the administration in the hands of a British Resident. Sarawak had a British hereditary ruler or rajah, Sir Charles Vyner Brooke, but a Special Commissioner represented the Governor.

History. An important development in British Malaya reported over the Japanese radio during 1943 was the cession of the four Unfederated Malay States of Kedah, Kelantan, Perlis, and Trengganu to Thailand by the Japanese Government "in gratitude for its aid." Another announcement of October 5 told of the creation of provincial and municipal councils "entirely composed of Malaysians" as "a further step toward the administrative independence of Malaya." The English language was reportedly retained as the international language of the region, but was renamed "Koango," meaning the "Asia Development Language." Other Tokyo broadcasts announced that construction was under way on improved highways connecting Taiping and Kota Bharu on the west and east coasts of northern British Malaya, and linking Kota Bharu with Singapore. The latter road was to follow the east coast for some 400 miles. See JAPAN and THAILAND, under *History*.

BRITISH NEW GUINEA. Same as Papua.

BRITISH NORTH BORNEO. See BRITISH MALAYA.

BRITISH SOLOMON ISLANDS. A large group of islands under British protection, lying in the Pacific to the east of New Guinea, which were occupied by Japanese armed forces during the first half of 1942 and largely recaptured by Allied forces in 1942–43. The most important islands are Choiseul (1,500 sq.

mi.), Florida, Gizo, Guadalcanal (2,500 sq. mi.), Kolombangara, Malaita (2,000 sq. mi.), New Georgia, Rendova, Rennell, Ronongo, Russell, San Cristoval, Santa Isabel, Shortland, Treasury (or Mono), Vella Lavella. The area within the boundaries of the protectorate amounts to about 375,000 square nautical miles (total land area, 11,000 sq. mi.). Population (1931 census), 94,105 (all Melanesian or Polynesian natives except for 497 Europeans and 193 aliens). Capital, Tulagi.

Production, etc. Coconuts, rubber, sweet potatoes, pineapples, and bananas were the chief crops. Other products: ivory nuts, trocas shell, timber, green snail shell, and bêche-de-mer. Trade (1939–40): imports £189,772; exports £180,860 (copra, 21,994 tons valued at £149,368). Finance (year ended Mar. 31, 1941): revenue £51,320; expenditure £65,848. The administration was in the hands of a Resident Commissioner (assisted by a nominated Advisory Council), acting under the authority of the British High Commissioner of the Western Pacific (resident in Suva, Fiji).

History. The killing by Japanese strafing of Col. C. N. F. Bengough, British Acting Commissioner in the British Solomon Islands, was confirmed on Aug. 31, 1943, by Sgt. T. E. Canley, sole survivor of an Allied bomber shot down off Vella Lavella island, July 24, 1943. For the Solomon Islands campaign during 1943, see WORLD WAR.

BRITISH SOMALILAND. A British protectorate in East Africa, bounded north by the Gulf of Aden and south by Ethiopia and Italian Somaliland. It was captured by the Italians during August of 1940 and recaptured by British Imperial Forces during March of 1941. Area, 68,000 square miles; population (1938 estimate), 350,000, including 2,700 nonnatives. Chief towns: Berbera, the capital (20,000 inhabitants in 1939), Hargeisa, Burao, Zeila, Erigavo, Borama.

Production and Trade. Livestock raising was the main occupation of the people. In 1936 the protectorate had 2,500,000 sheep, 2,000,000 goats, 1,500,000 camels, 30,000 cattle, 2,000 donkeys, and 1,000 horses. The agricultural crops include maize, barley, sorghum, and wheat. Trade (1941–42): imports £635,743; exports £191,464. Cotton piece goods, rice, dates, and sugar were the main imports. The chief exports were sheep, goats, skins, myrrh, and frankincense. Shipping (1938): 158,673 tons cleared.

Government. Financial estimates (year ended June 30, 1942): revenue £216,071; expenditure £189,332. Military Governor, Col. G. T. Fisher (assumed office in March, 1943).

BRITISH SOUTH AFRICA. See SOUTH AFRICA, UNION OF.

BRITISH WEST AFRICA. See CAMEROONS, BRITISH; GAMBIA; GOLD COAST; NIGERIA; SIERRA LEONE.

BRITISH WEST INDIES. The colonial possessions of Great Britain in the West Indies, comprising three main groups of islands: (1) Bahamas, (2) Jamaica and adjacent islands, and (3) other islands scattered throughout the Lesser Antilles (Leeward Islands, Windward Islands, Barbados, Trinidad, and Tobago). Bermuda, British Guiana, and British Honduras (q.v.) are excluded. The area and population of the British West Indies, by main island groups, are shown in the accompanying table. The inhabitants are for the most part Negroes.

Production, etc. Agriculture is the main occupation in virtually all of the islands, the chief crops being sugar (432,500 tons, 1942), coconuts, cotton,

citrus fruits, cocoa, vegetables, and (in Jamaica) bananas. The tourist business, manufacturing for local consumption, and (in Trinidad) the production of petroleum and asphalt are the other leading sources of income. There is no unified governmental system, the island groups listed above constitute separate colonies, each with a governor appointed by the Crown and with varying degrees of popular representation in their legislative bodies. See the separate article on each colony and its main subdivisions.

Island group (Capital)	Sq. mi.	Pop. (1941)
Bahamas (Nassau).....	4,404	71,474
Barbados (Bridgetown).....	166	197,956
Jamaica * (Kingston).....	4,720	1,253,620
Leeward Islands (St. John).....	422½	97,644
Trinidad & Tobago (Port of Spain)...	1,980	506,316
Windward Islands (St. George's).....	820	274,046 ^b
Totals.....	12,512½	2,401,056

* Including dependencies. ^b 1940 estimate.

History. The first report by Sir Frank Stockdale, Comptroller for Development and Welfare in the British West Indies, was published as a White Paper in London early in 1943 ("Development and Welfare in the West Indies, 1940-42." Col. No. 184. H.M. Stationery Office, 1s. 6d. net). His report described the plans and measures adopted for the improvement of public health, agriculture, labor conditions, social welfare, and education under the Colonial Development and Welfare Act passed by the British Parliament in 1940 (see 1941 YEAR BOOK, p. 92). Development schemes proposed up to September, 1942, involved a total expenditure of £5,894,324, of which £1,202,725 had been approved.

In addition to this program of economic and social rehabilitation, the British Government early in the year accepted most of the demands for constitutional reform put forward by the political parties in Jamaica (which see). Meanwhile the Anglo-American Caribbean Commission, established in 1942 proceeded with its studies and plans aiming at the economic and social development of British and American possessions throughout the Caribbean on a regional basis (see 1943 YEAR BOOK, p. 96). According to a statement made by the British Colonial Secretary in the House of Commons March 16, the Commission in its first year of operation had made a good start in attacking problems common to the whole Caribbean area. It was working, he said, on fishing research, venereal disease and other medical questions, broadcasting, and the provision of materials required for carrying out the British West Indies development schemes under the Colonial Development and Welfare Act.

The fourth meeting of the Commission was held at Charlotte Amalie, Virgin Islands of the United States, in August. It decided to create an advisory Caribbean Research Council to promote scientific, technological, social, and economic research on the problems of the region. The Council was to operate through committees for agriculture, forestry and fisheries, health, sociology, and industry. A provisional sub-committee selected land tenure as the subject for the first detailed agricultural study.

A three-day conference of British colonial import controllers in the British West Indies, Bermuda, and the Bahamas was held in New York City in April to coordinate shipments of foodstuffs and essential supplies to those islands. Representatives of the United States and Canadian Governments attended. British West Indian troops were sent to Dominica on May 11 in connection with the crisis that had developed in the nearby French posses-

sions of Martinique (which see) and Guadeloupe.

See *The Caribbean Islands and the War*, a report prepared by the U.S. Section of the Anglo-American Caribbean Commission and released by the State Department Dec. 13, 1943.

BROOKINGS INSTITUTION. An organization devoted to public service through research and training in economics and government. It maintains a division of training in which only those who have had at least two years of graduate work are accepted as research fellows. Due to the war, the usual fellowships for graduate study were not granted for the academic year 1943-44.

In carrying out its purpose to aid constructively in the development of sound national policies without regard to the special interests of any group, the Institution conducted during 1943 several investigations, some of which dealt with problems of the war effort. The resulting studies were published under the following titles: *World Minerals and World Peace*, by C. K. Leith, J. W. Furness, and Cleona Lewis; *The New Philosophy of Public Debt*, by H. G. Moulton; *Belgian Banking and Banking Theory*, by B. S. Chlepner; and *How Nazi Germany Has Controlled Business*, by L. Hamburger. Four additional pamphlets were published in the series, *Price Making in a Democracy*, by Edwin G. Nourse. Other pamphlets included: *Is There Enough Manpower?* by Harold W. Metz; *Collapse or Boom at the End of the War?* by H. G. Moulton and Karl T. Schlatterbeck; *Do We Want a Federal Sales Tax?* by Charles O. Hardy; *Rationing and Price Control in Great Britain*, by Jules Backman; *The Price Control and Subsidy Program in Canada*, by Jules Backman.

The Institution is supported from endowment funds and annual grants from philanthropic foundations. The officers of the board of trustees for 1943-44 were: Chairman, Dwight F. Davis; vice chairman, Dean G. Acheson; president, Harold G. Moulton; vice president, Edwin G. Nourse; treasurer, Henry P. Seidemann; and secretary, Elizabeth H. Wilson. Headquarters are at 722 Jackson Place, Washington, D.C.

BROOKLYN INSTITUTE OF ARTS AND SCIENCES. One of America's oldest and largest institutions for informal education, located in Brooklyn, N.Y. Its public activities are conducted at four centers: The Department of Education at the Academy of Music, the Central Museum, the Children's Museum, and the Botanic Garden. Founded in 1824, the Institute was incorporated in its present form in 1890. Total membership is about 4,500 and is open to everyone.

The Department of Education at the Academy of Music presents an adult education program annually of concerts, lectures, forums in every major field of the arts and sciences. Approximate attendance at these events for the season 1942-43 was 220,000. The Institute's Museums possess collections in art, ethnology, and natural science. On June 25, 1941, the Art and Photography Classes formerly conducted at the Department of Education at the Academy of Music were transferred to the Brooklyn Museum to form the new Art School of the Brooklyn Museum. Attendance at both Museums for the year 1943 totaled 604,444. The Institute's Botanic Garden comprises more than 50 acres and plant houses containing tropical and sub-tropical species. Botanic Garden attendance during 1943 totaled 1,465,790.

Mr. Edward C. Blum is Chairman of the Board of Trustees and Mr. Adrian Van Sinderen President of the Brooklyn Institute. Julius Bloom is Director

of the Education Department at the Academy of Music; Mrs. Laurance P. Roberts, Director, Museums; Mrs. William Lloyd Garrison, 3d, Curator-in-Chief of the Children's Museum; Dr. George M. Reed, Acting Director of the Botanic Garden. Executive offices are located in the Academy of Music, 30 Lafayette Avenue, Brooklyn.

BRUNEI. See **BRITISH MALAYA**.

BRUNSWICK. See **GERMANY** under *Area and Population*.

BUDGET. See **PUBLIC FINANCE**; countries under *Finance*. For *Budget Message*, see **TAXATION**; also, **UNITED STATES**.

BUDGET, Bureau of the. A division of the Executive Office of the President which assists the President in the preparation of the Budget and the fiscal program of the Government. Its chief branches pertain to Legislative Reference, Estimates, Administrative Management, Statistical Standards, and fiscal programs (the Fiscal Division). Special activities at the present time include the War Projects Unit, which reports upon all war construction projects and makes recommendations toward increased efficiency and economies, the Committee on Records of War Administration, and the Equipment and Supply Section, which surveys supplies in Government agencies and assists in the redistribution of surpluses. Director: Harold D. Smith. See **PUBLIC FINANCE**.

BUHL FOUNDATION. See **PHILANTHROPY** under *Foundation Activities*.

BUILDING AND LOAN ASSOCIATIONS. See table under **RECONSTRUCTION FINANCE CORPORATION**.

BUILDING MATERIALS. Sharply divergent trends characterized the chief branches of the building materials industry in 1943. The sharp drop in construction (q.v.) which brought total building activity down from 13½ billion dollars in 1942 to well below eight billion dollars in 1943 was reflected in a correspondingly sharp contraction in cement output. However, while this was a planned contraction, the year also witnessed a decline in lumber output which was decidedly undesired. Lumber became one of the scarcest materials in 1943 due mainly to rapidly mounting manpower shortages in the woods. Lumber not only became the chief bottleneck holding up any relaxation in private construction activities, but also posed serious difficulties in supplying crating and boxing needs for military and essential civilian purposes.

The decline in lumber and cement supplies last year as measured by official index figures was as follows:

BUILDING MATERIAL SUPPLIES
[Federal Reserve Board Index]
1935-39 = 100

	Lumber	Cement
1939.....	106	114
1940.....	115	122
1941.....	129	154
1942.....	130	171
1943.....	117	129

Among other major building materials for which partial statistical data are available, window glass production averaged 1,118,000 boxes monthly for the period from January to August of 1943 when publication of these figures was temporarily discontinued. This represented an average of 68.8 per cent of the industry's capacity, compared with an average monthly production of 1,316,000 boxes per

month in 1942 for an average capacity utilization of 81.2 per cent.

Gypsum production in 1943 showed a decline of approximately 16 per cent for crude gypsum and 18 per cent for calcined gypsum. (Fourth quarter gypsum figures are estimated.)

Contrary to this trend, paint sales actually increased last year. Sales of paint, varnish, lacquer, and fillers averaged 48 million dollars monthly for the first ten months of 1943, as against a monthly average of 44 million dollars in 1942.

Building material prices during the year showed a gradual increase, caused primarily by higher lumber prices. Lumber ceilings were raised by the Office of Price Administration in an attempt to stimulate production. Price movements for a group of selected building materials was as follows:

BUILDING MATERIAL PRICES
[Bureau of Labor, 1928 = 100]

		Building Material Group	Brick and Tile	Cement	Lumber	Paint Materials
1943	Jan....	109.8	98.7	94.2	133.3	100.6
	Feb....	110.2	98.6	94.2	134.6	101.2
	Mar....	110.4	98.7	94.2	134.6	102.2
	Apr....	110.3	98.7	94.2	134.7	102.5
	May...	110.5	98.9	93.9	135.6	102.2
	June...	110.6	99.0	93.6	136.3	102.0
	July...	110.7	99.0	93.6	137.1	102.0
	Aug....	112.2	99.0	93.6	142.0	102.8
	Sept....	112.5	99.0	93.6	142.7	102.6
	Oct....	112.7	99.0	93.6	143.1	102.8
	Nov....	113.1	100.0	93.6	143.9	103.2
	Dec....	113.4	100.0	93.6	144.0	103.3

Lumber and building material sales by wholesalers dropped to 4,228 millions of dollars as compared with 4,791 millions of dollars in 1942, but even at this reduced rate it was still considerably ahead of the 2,543 millions of dollars registered in 1939 when the total new construction volume for private and public construction together was slightly above six billions of dollars.

Retail sales of building materials and hardware (not separated in official U.S. Department of Commerce data) dropped to 3.2 billions of dollars in 1943 as against 3.8 billions of dollars in 1942, and 2.7 billions of dollars in 1939.

Lumber. Total lumber production in 1943 reached approximately 32½ billion feet according to the Lumber Survey Committee of the Department of Commerce. This was 10 per cent less than the 1942 output and reflected the fact that on Nov. 1, 1943, the labor deficiency for the lumber industry was estimated at 25 per cent of the number of employees needed for maximum operation.

While production for the year actually came up to the goal set by the Lumber and Lumber Products Division of the War Production Board, it must be realized that this goal was based on estimates of possible production rather than on demand. The 1943 lumber consumption for military and essential civilian uses actually was over 3 billion board feet short of estimated lumber consumption. As a result, stocks of lumber at mills and in distributors' hands declined to a dangerously low level. Mill stocks on Oct. 31, 1943, were down to 3,675 million feet or approximately 30 per cent below those of a year ago. The decline in inventories was further intensified by the fact that log reserves also became wholly inadequate.

The shift in lumber use was highlighted by the fact that military demands for boxing and crating lumber soared from approximately four billion feet in 1942 to approximately 15 billion for 1943, with little evidence in sight that this demand will be any less in 1944. The consumption of nearly 50 per cent of the total national output for this type of

lumber has thrown off the calculations of many who foresaw a reduction in demand for military use in 1943.

The decline in lumber production did not affect all producing areas alike. Preliminary figures show that in the Pacific Northwest area, the decline in production amounted to only 8 per cent from 1942 levels. Results in the South, where Southern Pine is the principal product, were much more unfavorable, however. The Southern Pine industry failed to meet its 1942 production record by approximately 20 per cent owing to a reduction from approximately 11¼ billion board feet in 1942 to about 9.5 billion feet in 1943.

Lumber production and consumption trends are pictured in the following table:

LUMBER PRODUCTION AND CONSUMPTION

(Million Board feet)	Production	Consumption ^b		
		Total	Soft-woods	Hard-woods
1943 ^a	32,500 ^b	35,012	28,108	6,904
1942.....	35,700 ^b	42,510	34,555	7,955
1941.....	32,880 ^c	34,927	28,995	5,932
1940.....	28,932 ^c	30,547	26,169	4,378
1939.....	24,972 ^c	26,438	22,392	4,046

^a Estimated. ^b Lumber Survey Committee. ^c National Lumber Manufacturers Association.

The largest buyer of lumber in the nation today is the Corps of Engineers of the War Department which acts as the central procurement agency of lumber for the Army, the Navy, the Maritime Commission, and other Federal agencies and their primary contractors. Approximately 20 per cent of all lumber purchased in the nation in 1943 was acquired by this agency, according to a report on current lumber industry problems issued by the Patman House Committee on Small Business. According to this report, the Corps of Engineers on Dec. 31, 1943, had pressing orders on its books for more than a quarter of a billion feet of Southern Pine which it had been unable to locate and acquire for essential war uses.

The growing scarcity of lumber was reflected in a tightening of lumber restrictions by the War Production Board. Most lumber types were placed under strict allocation late in 1943, through issuance of two new Conservation Orders which became effective Jan. 1, 1944. These orders were M-361 on Southern Pine, and M-364 on the distribution of seven leading hardwood lumber species. Under M-361 the Southern Pine production of war mills cutting 10,000 feet or more is now reserved for purchase by the war agencies or their contractors, including the Central Lumber Procuring Agency.

Further curtailment of civilian consumption in industrial uses of lumber was provided by Limitation Order L 260-a which now limits manufacturers of furniture to 84 per cent of the amount of lumber they used in 1943. The Furniture Limitation Order also went into effect Jan. 1, 1944. Shipments of furniture manufactured during the first ten months of 1943 were 12 per cent less than during the corresponding period of 1942, according to monthly reports of the National Association of Furniture Manufacturers. Production of furniture during the same period showed a drop of 22 per cent.

Production of oak flooring declined constantly during the year. For the first ten months of the year the oak flooring industry consumed approximately 250 million feet as against 364 million feet for the same period in 1942. Lumber consumption in the maple flooring industry during the first ten months of 1943 totaled 60 million feet compared with 96 million feet for the same period of 1942.

Railways (q.v.) were hard hit by difficulties in

obtaining adequate supplies of cross ties and lumber for maintenance and repairs and had to rely largely on their inventories.

Cement. After establishing a record for shipments of 185,301,000 barrels in 1942, operations in the cement industry slumped during 1943 as the war construction program began to taper off. Shipments for 1943 totaled approximately 127,000,000 tons, lowest total for any year since 1939.

The drop in demand was more severe in the East, where war construction had started earlier, than in the Southeast and Southwest. The net decline, for example, was only about 5 per cent in Virginia, Florida, Georgia, and Louisiana, as against a maximum of 46 per cent in New York and Maine.

Shipments during the last half of 1943 totaled 62,000,000, a decline of 5,000,000 barrels from the total for the first half. This decline was contra-seasonal, as the latter half of the year normally accounts for a much larger proportion of the year's total. In 1942, for example, shipments in the first half totaled approximately 79,000,000, and in the latter half 106,000,000. The aim of the industry is normally to produce as evenly as possible, in so far as storage facilities permit.

Production declined slightly less than shipments in 1943, and as a result, stocks increased. For the first eleven months, production totaled 125,103,000 barrels, a decline of 26 per cent from the 168,643,000 barrels produced in the corresponding period of 1942. This meant an operating rate of only 40 to 45 per cent of capacity for the year. Shipments for the eleven months were 121,925,000 as against 176,312,000,000, a decline of 31 per cent. Stocks, including clinkers, at the end of November, 1943, totaled 25,567,000 barrels, as against 15,088,000 barrels at the end of November, 1942.

Earnings in the cement industry declined sharply as a result of the drop in sales and the rise in costs. Chief factor in the rise in costs was the increase in basic wage rates as well as the payment of overtime rates at plants where the 44 and 48 hour week was adopted as a result of local manpower shortages.

The decline in the demand for cement relieved the manpower shortage of the industry during the latter half, but new problems emerged as a result of policies adopted by Government agencies.

The Federal Trade Commission, after an investigation that lasted for several years, issued a cease and desist order against the use of basing point pricing system which the cement and other industries have used for many years. This order is being appealed by the cement companies named in the complaint on the grounds that the basing point system does not violate the law covering fair trade practices.

In September, the War Production Board's Committee on Transportation and Stockpiling issued an order establishing zones and barring long-hauling of cement, with a view to effecting savings in transportation. Although the industry maintained that the order would result in virtually no savings in transportation, the WPB made only minor changes in it subsequently in response to the industry's protests that it was the only trade shipping its product in box cars that was affected by such restrictions.

New uses were developed for cement last year in such applications as bathtubs and manhole covers, to meet shortages of other materials. Such shortages hindered cement as well as aided it, however. Limited scheduling of concrete reinforcing bars by the War Production Board's steel Division, and the shortage of lumber were contributing factors in restricting wider use of cement last year.

H. E. LUEDICKE.

BUKA. See NEW GUINEA, TERRITORY OF.

BULGARIA. A Balkan monarchy. Capital, Sofia. King Boris III, who succeeded to the throne Oct. 3, 1918, died Aug. 26, 1943, and was succeeded by his six-year-old son, Simeon II.

Area and Population. Excluding areas annexed from Greece and Yugoslavia in 1941, but including 2,982 square miles of Southern Dobruja, with a population of 378,344, annexed from Rumania on Sept. 7, 1940, Bulgaria has an area of 42,797 square miles and a population estimated at 6,700,000 on Jan. 1, 1941. Following the German invasion of Yugoslavia and Greece in April, 1941, Bulgaria occupied a large part of Yugoslav Macedonia, and the Greek territories of Western Thrace, Eastern Macedonia, Florina, and Castoria. The area of these territories was estimated at 15,875 square miles and the population at about 1,690,000. In 1943 the total area claimed by Bulgaria was about 58,670 square miles with 8,500,000 inhabitants. Excluding Dobruja and the other newly annexed territories, living births in 1941 numbered 135,899 (21.3 per 1,000); deaths, 79,901 (12.5); marriages, 55,435 (8.7). The infant mortality rate declined steadily from 144 per 1,000 living births in 1938 to 123 per 1,000 in 1941. Estimated populations of Sofia on Jan. 1, 1942, 401,300; of other cities in 1941: Plovdiv (Philippopolis), 113,000; Varna, 78,000; Ruse (Ruschuk), 52,000; Burgas, 41,000.

Defense. See 1943 YEAR BOOK.

Education and Religion. At the 1934 census 20.4 per cent of the males and 42.8 per cent of the females were illiterate. In 1938-39 there were 252 kindergartens with 12,702 pupils, 4,743 public elementary schools with 596,111 pupils, 2,044 secondary schools with 360,786 pupils, and one State University (at Sofia) with 6,030 students. The American College at Sofia, with about 400 students, was closed Sept. 12, 1942. The 1934 census showed 5,128,890 members of the Orthodox Church of Bulgaria, 821,293 Moslems, 48,398 Jews, 45,704 Roman Catholics, 23,476 Armenian-Gregorians, and 8,371 Protestants.

Production. About four-fifths of the population live by agriculture and fishing. Production of cereals in 1940 was estimated at 3,400,000 metric tons (3,560,000 in 1939); tobacco, 140,800,000 lb. in 1942; rose oil, 1,600 kilograms in 1940; cotton, about 14,000 tons in 1940; beet sugar, 40,000 metric tons in 1940-41; raw silk, 192 metric tons in 1940. Other production was (in metric tons): Lignite, 2,784,000 in 1942; coal, 25,605,000 in 1940; cement, 194,000 in 1938; salt, 77,000 in 1938. Annual output of the mining industry, valued at 956,000,000 leva, is about 6 per cent of the total industrial production.

Foreign Trade. Including bullion and specie, imports in 1942 totaled 12,924,000,000 leva (10,238,000,000 in 1941); exports, 13,416,000,000 leva (9,240,000,000 in 1941). Tobacco, fruit, eggs, wheat, hides, and wine are the chief exports. In 1940 Germany supplied 70 per cent of the imports and took 59.2 per cent of the exports. In subsequent years the German share of Bulgaria's trade increased.

Finance. Budget estimates for the calendar year 1942 were (millions of leva): Receipts, 14,402; expenditures, 17,800 (7,860 for war). The 1943 estimates called for expenditures of 22,600 millions (8,500 millions for defense). Actual 1941 returns (millions of leva): Receipts, 13,778; expenditures, 16,424 (6,791 for war). Public debt on Dec. 31, 1942 (millions of leva): Internal, 28,464 (consoli-

dated, 14,022; floating, 14,442); external, 12,311 at the current rate of exchange. Comparative debt totals for Dec. 31, 1941 (in millions of leva): Internal, 16,967; external, 12,604. At the official exchange rate, 1 lev equaled 0.0305 reichsmark. At the published exchange rate in July, 1943, 84 leva equaled \$1.00 U.S., but in actual practice the rate was said to be 300 leva to the dollar.

Transportation. Bulgaria in 1942 had more than 2,130 miles of state-owned railway lines, over 19,600 miles of highway, and air lines connecting with the chief cities of Axis Europe. A number of new railways of both economic and strategic importance were constructed during 1941-43. The railways in 1942 carried 17,779,300 passengers, a 27 per cent increase over 1941. A new all-weather highway connecting the Bulgarian cities and Danubian ports with the Adriatic at Durazzo, Albania, and Antivari, Yugoslavia, was completed early in 1943. The Danube is an important traffic artery. Three new luxury steamers and other improved transport facilities were placed in operation in 1943 to handle increased traffic.

Government. The Constitution of 1879 remained suspended from the Georgiev coup d'état of May 19, 1934, through 1943. All political parties were dissolved in 1934 and the formation of new ones was prohibited. King Boris ruled as virtual dictator after overthrowing Premier Georgiev's dictatorship on Jan. 22, 1935. The parliaments elected in March, 1938, and in December, 1939-January, 1940, were deprived of practically all legislative powers. The former political parties were not permitted to present candidates or otherwise participate in the electoral campaigns. Deputies were elected on a personal basis and government manipulation of the electoral machinery produced pro-government majorities (of 140 out of 160 members of the Sobranie in the latter elections). Premier at the beginning of 1943, Bogdan Philov, heading a non-party cabinet reorganized Apr. 12, 1942.

The Government of Bulgaria adhered to the Three Power Pact, or Axis military alliance, Mar. 1, 1941. On the same date German armed forces were openly permitted to enter Bulgaria, which they used as a base for subsequent attacks upon Yugoslavia and Greece (see 1942 YEAR BOOK, p. 86 f.). On Apr. 24, 1941, Bulgaria declared that a state of war "existed in those areas of Greece and Yugoslavia occupied by Bulgarian troops." It declared a state of war with Great Britain and the United States Dec. 13, 1941, "in accordance with Article 3 of the Tripartite Pact." Bulgaria adhered to the Anti-Comintern Pact Nov. 25, 1941, but remained at peace and in diplomatic relations with the Soviet Union. For 1943 developments, see below.

HISTORY

Bulgaria's Dilemma. As the tide of war turned steadily against the Axis during 1943, the Germans intensified their persistent efforts to force Bulgaria into the armed struggle with the Soviet Union. The danger that Hitler would oust the Sofia Government and rule the country as an occupied province hung over Bulgaria throughout the year. But again, as in 1941 and 1942, the Germans were balked by the strong pro-Russian sentiments of the Bulgarian masses and by the opposition of a minority of the Bulgarian Cabinet. If the Government sent troops to fight in Russia, it faced the virtual certainty of internal revolution. Moreover it would link Bulgaria's fate more closely to a doomed cause. On the other hand, open desertion of the Axis would mean not only German military rule but also the loss of the territories

Bulgaria had gained from Rumania, Greece, and Yugoslavia with German aid.

The Bulgarian Government accordingly played for time while seeking a way out of its dilemma that would enable it to save as much as possible from the impending Axis collapse. It was reported to have made repeated efforts to open secret peace negotiations with the Great Britain and the United States. Meanwhile it yielded to German demands for increased military aid against the Yugoslav and Greek guerrillas. Bulgarian and German forces jointly prepared to resist a threatened Anglo-American invasion from the Aegean Sea or Turkey.

In return for this aid the Bulgarians during the summer of 1943 occupied additional Greek territories between the Struma and Vardar Rivers. Large numbers of Bulgarian peasants reportedly were settled in the occupied regions of Greece and Yugoslavia, from which many thousands of the former inhabitants had fled or been driven, in order to bolster Bulgaria's postwar claims to these territories. As a counterweight to German demands for aid against Russia, King Boris and his Cabinet demanded still greater territorial gains at the expense of Greece and Yugoslavia.

In the midst of this complex and dangerous crisis, King Boris died mysteriously at the end of August. The Germans immediately took a firmer grip on the mechanisms of military and political power. But they did not succeed in breaking the resistance of the Bulgarian people to the pro-German policy of the Sofia Government.

Resistance to Axis. Early in December, 1942, large-scale anti-Axis and anti-war demonstrations had broken out in Bulgaria. They were inspired by the German defeats in North Africa and at Stalingrad (see 1943 YEAR BOOK, p. 99). These demonstrations and other forms of resistance continued with growing violence during the first months of 1943. They served to counteract increased pressure from Germany and from pro-German elements in Bulgaria for intervention in the Russian struggle. Reports seeping out of the country during January and February told of large-scale demonstrations, strikes, and attacks upon police stations and government offices by workers and students in many Bulgarian cities; clashes with troops and the police, in which both sides suffered numerous casualties; great numbers of arrests and some executions; mutinies among some Bulgarian troop units; the sabotaging of communications, etc.

The opposition consisted of a sizable underground Communist movement operating in close liaison with Moscow; the strong non-Communist left-wing agrarian bloc which formed part of the "tolerated opposition"; intellectuals; students; and many other pro-democratic or anti-German elements, including some leading politicians and army officers. The reserve officers of the strongly nationalist Zveno Club, who organized the military revolt of 1934, strongly opposed the pro-German policy of the King and his Government. Former Premier Nicholas Mushanov and the Democratic Entente leader, Atanas Burov, vigorously protested the dictatorship and its repressive policies. Members of the "tolerated opposition" in the largely hand-picked Parliament were equally outspoken in their criticism. On the other side were aligned the King, most of the members of the Cabinet and Parliament, many ardently pro-German army officers, and the various pro-Nazi and strongly anti-Communist political groups.

Extremist enemies of the Government met its repressive measures with bloody terrorism. They carried on a campaign of assassination that claimed

110 victims among pro-German government functionaries up to the end of May. Among the prominent victims was Gen. Christo Lukov, former War Minister and leader of a Nationalist faction demanding immediate intervention against Russia, who was shot and killed in mid-February. Sotir Janev, president of the Foreign Affairs Committee of Parliament, personal adviser to the King, and editor of the semi-official *Slovo*, met the same fate on April 15. On May 2 Col. A. Pantev, president of the military court in Sofia and former chief of the State police, was assassinated. Each killing was the signal for a new police drive against oppositionists.

Meanwhile the Germans continued to move additional troops into Bulgaria and to strengthen defense installations along the Aegean coast, the Turkish frontier, and the Black Sea coast. Large numbers of residents of the coastal areas were evacuated inland. Toward the end of March the Government began new large-scale deportations of Jews to Germany and Poland in accordance with German demands. The vice president of Parliament was ousted on March 27 for criticizing the deportations as "cruel, inhuman, and often unjustified."

Germany Increases Pressure. On March 31 Hitler received King Boris at his general headquarters and "had a long and detailed talk with him about German-Bulgarian collaboration and friendship." This announcement by the Berlin radio inaugurated another lengthy period of acute political tension in Bulgaria. The King's return to Sofia was accompanied by reports that Hitler had demanded immediate payment in the form of military aid against Russia for the new territories Bulgaria had acquired with German help. Hints that Boris had agreed to this demand "in principle" were sufficient to revive anti-Axis demonstrations and riots throughout the kingdom. In many large towns, the Government was forced to declare a state of siege.

The Philov Cabinet again split over the issue. It was indicated that the pro-German majority favored a war declaration on the ground that the Bulgarian people could not resist a *fait accompli*, while the anti-German members pointed to the country-wide disturbances as proof that the nation would refuse war with Russia at all costs. The King vainly sought to achieve unity within the Cabinet in support of his policy.

May Day brought new anti-Government outbreaks of such severity that the King and his key Ministers reportedly left Sofia for Plovdiv. Police and troops in the capital fired on great crowds with machine guns on May 4-5, according to Berne reports. Martial law was declared, newspapers banned, and all stores closed for two days. The termination of these restrictions brought no relaxation of tension. The political crisis continued week after week, despite the reported presence of the German Gestapo Chief, Heinrich Himmler, to assist in crushing opposition.

Renewed anti-Government rioting broke out in Sofia May 26 when the police began the deportation of Jews from the Sofia ghettos to the Reich and Poland. In mid-June the Government appointed a 20-man commission to mobilize national sentiment against sabotage, subversive activity, grain hoarding, and Communist activity. But large numbers of Bulgarians continued to display violently anti-Axis sentiments. Meanwhile the Government wavered on the brink of war with Russia.

The downfall of Mussolini on July 25, coming on the heels of continued Allied victories, caused

panic among pro-Germans in Bulgaria and instilled new vigor into the opposition. King Boris and Premier Philov were reported to have quarreled violently over the responsibility for the kingdom's desperate position. Some Bulgarian Fascists were beaten up on the streets of Sofia, according to the British radio. There were violent scenes in Parliament, with opposition Deputies attacking the Government and demanding peace.

Death of Boris. The collapse of Italian fascism and new German reverses in Russia forced Hitler to rush German troops into the Balkans and to call on the satellite states for increased military aid. King Boris, however, showed signs of wavering in his attachment to the Axis cause. He received in audience ex-Premier George Kiosseivanov, whose sympathies with the Anglo-American powers were well known. Attempting to broaden the base of the Government and to insure his regime against a German collapse, he reportedly asked former Premier Mushanov and two other leaders of the "tolerated opposition" to join the Cabinet and help to form a government of national union.

In the midst of these discussions, Hitler again called Boris to his general headquarters during the third week of August. The Fuehrer was said to have presented the King with a virtual ultimatum, demanding the acceptance by midnight on August 28 of the following demands: (1) immediate and total mobilization of Bulgaria's armed forces and economic resources for the prosecution of the war, (2) creation of a German-manned defense line along the Turkish frontier, and (3) a free hand for the German political police in Bulgaria to crush anti-German demonstrations and terrorism.

The King returned to Sofia on August 24 to consult his Cabinet. On August 27 the Berlin radio announced that Boris had been seriously ill for three days with angina pectoris. The same day Swiss reports stated that the King had been shot by an assassin immediately following his return from Hitler's headquarters. Moscow charged that he had been poisoned by the Germans. A proclamation read by Premier Philov over the national radio on August 28 stated that Boris had died that afternoon "after a brief but grave illness." Another proclamation, which the Premier read immediately afterward, announced that six-year-old Crown Prince Simeon had ascended the throne under the name of Simeon II and that in accordance with the Constitution the Cabinet would rule until the establishment of a regency.

The Regency. The announcement of the King's death initiated another acute political crisis. Opposition elements launched new demonstrations against the Government. Premier Philov asked Mushanov, leader of the "tolerated opposition," for a 40-day political truce during the period of national mourning for Boris. Mushanov refused when the Cabinet turned down his demand for a revision of Bulgaria's foreign policy. The Germans meanwhile had acted to forestall the overthrow of the Government by seizing control of the Bulgarian army, police, and communication and transportation facilities, with the cooperation of friendly Bulgarian officials. A strict censorship isolated Bulgaria from the outside world for 72 hours while the Gestapo rounded up suspected Allied agents and pro-Soviet Bulgarian leaders.

This prompt action enabled the Germans to maintain control temporarily through a compliant Bulgarian regime. Premier Philov, after consulting Hitler, called a special session of Parliament on September 7, at which three regents acceptable to the Germans were chosen. They were Philov

himself, Prince Cyril, a brother of Boris, and Lieut. Gen. Nikola Michov, the Minister of War.

The Philov Cabinet resigned on September 12, and a new Government headed by Philov's former Finance Minister, Dobri Boshilov (Bojilov), was formed the following day. The new Cabinet was notable for the absence of Philov's strongly pro-Nazi but highly unpopular Minister of Interior, Petar Gabrovski. However the Government remained subservient to Berlin. Boshilov was said to be under the thumb of Regent Philov, who in turn took his directions from the German Minister, Gustav Beckerle.

Additional German divisions were rushed into Bulgaria and preparations intensified for defending the kingdom against an Allied or Turkish attack. The Berlin radio on October 22 revealed that a conference had been held between Hitler, the Bulgarian Regents Philov and Prince Cyril, and their highest military aides. This was followed by Yugoslav reports that the Regents had yielded to Hitler's demands and were moving more Bulgarian troops into Yugoslavia.

Meanwhile there were reports of serious friction between the Regents and Queen Ioanna, widow of Boris; of continued agitation against the Government's pro-German policy; and of the initiation of a more conciliatory policy toward the Opposition by the Government. There were also signs of improved Bulgarian-Soviet relations. Another acute political crisis developed after an Allied bombing of Sofia's railway yards on December 10. The U.S. Government on December 11 and Russia on December 27 again warned Bulgaria to withdraw from the war. At the same time the Allied Governments rejected new indirect Bulgarian peace feelers. In mid-December there were further resignations from the Cabinet. A rigid censorship was clamped down on outgoing communications. There were indications that the conflict between pro-German and anti-German forces in Bulgaria was reaching its climax. See GERMANY and GREECE under *History*.

BUNA S. See RUBBER.

BUND, German-American. See LAW under *War Decisions*.

BUREAUS, Federal. See under the descriptive word of each title, as INVESTIGATION, FEDERAL BUREAU OF.

BURGLARY. See FEDERAL BUREAU OF INVESTIGATION; INSURANCE.

BURMA. A British dependency in southeastern Asia, occupied by Japanese armed forces in 1942. Total area, 261,610 square miles, comprising Burma proper, the Chin Hills and Kachin Hills Tracts (192,158 sq. mi.), Shan States (62,335 sq. mi.), and unadministered territory (7,117 sq. mi.). The census of Mar. 5, 1941, showed a population of 16,824,000, as compared with 14,667,146 at the 1931 census. About two-thirds of the people were of Burmese race. The remainder were distributed among scores of other races, chiefly Shans, Karens, Indians, Chinese, Kachins, and Chins. During the Japanese invasion 500,000 persons, including half the Indian population, were evacuated from Burma to India. Buddhists comprise over 84 per cent of the total population; the rest are mainly Animists, Mohammedans, Hindus, and Christians. Chief cities (1931 populations): Rangoon, 400,416; Mandalay, 147,932; Moulmein, 65,506. Education (1939-40): 8,270 recognized schools and colleges with 639,259 students, and 18,745 unrecognized schools with 212,663 students.

Production. Four-fifths of the people are engaged in agriculture. With some 60 per cent of the cultivated area devoted to rice, Burma is the world's leading rice exporter, normally shipping abroad some 3,000,000 tons annually. Yields of the chief crops (in metric tons) were: Rice, rough, 8,198,000 in 1940-41; sesamum, 52,800 in 1939-40; groundnuts, 193,000 in 1939-40; cotton, 20,000 in 1940-41; rubber, 9,600 in 1940. Indian millet, corn, and beans are widely grown for domestic consumption. In 1939-40 the output of teak from the reserved forests totaled 307,997 tons.

Mineral output (in metric tons): Tungsten, 3,529 in 1938; lead, 78,600 in 1939; tin, 5,400 in 1939; petroleum, 1,116,000 in 1940; zinc, 55,800 in 1938; silver, 192.1 in 1939. Burma is one of the leading producers of rubies. In 1938 there were 1,019 industrial establishments (including over 600 rice mills) with 86,400 employees. The large mills, smelters, and oil refineries were British-owned.

Foreign Trade and Finance. Imports in 1940 were valued at 270,350,000 rupees; exports, 531,120,000 rupees (rupee averaged \$0.3016 for 1940). India supplied 63 per cent of the imports and took 52 per cent of the exports (mostly rice), while the rest of the British Empire supplied 18 per cent of the imports and took 32 per cent of the exports. United States exports to Burma rose from \$1,765,080 in the first nine months of 1938 to \$13,310,015 for the same period of 1941. The Japanese conquest in May, 1942, ended all trade with non-Japanese sources and cut off the large transit trade to China via the Burma Road.

Budget estimates (1941-42): revenue Rs171,300,000; expenditure Rs182,800,000. The bulk of the foreign debt was held in Great Britain.

Transportation. Economic life centers around the Irrawaddy and other great rivers, which offer the principal means of transportation and communication. Previous to the Japanese invasion, one shipping company operated a fleet of 1,000 river boats. Railways extended 2,266 route miles in 1939-40 and carried 4,000,000 tons of freight and 18,920,000 passengers. The Burma Road, opened in January, 1939, from the railhead at Lashio in northern Burma to Kunming, China, was Free China's principal trade route until blocked by the Japanese capture of Rangoon in February, 1942. The highways in 1940 aggregated 12,138 miles. Air services connecting Rangoon with Chungking, China, and the chief cities of India were disrupted by the Japanese occupation.

Government. Burma was separated from India on Apr. 1, 1937, and given its own constitution and government. Previous to the Japanese occupation in 1942, the executive power was vested in a Governor (appointed by the British Crown) who was advised by a council of ministers of not more than 10 members. The Governor had control over foreign affairs. Domestic affairs were administered by a Burman ministry, responsible to a Burman Legislature consisting of a Senate of 36 members (18 elected by the House of Representatives and 18 appointed by the Governor) and a House of Representatives of 132 elected members. Large areas in the northern and eastern hill districts were excluded from the legislature's control and placed under the jurisdiction of the governor. Upon the Japanese invasion, the British Governor (Sir Reginald Dorman-Smith), the Burmese Premier, and certain other Burmese officials set up headquarters at Simla, India. A few British officials of the Burma Government remained in charge of unoccupied districts of northern Burma.

On Aug. 1, 1942, the Japanese instituted a form

of government made up of a joint Burmese and Japanese administration under the nominal leadership of U Ba Maw, a former Premier of Burma. Under this arrangement the Burmese Parliament disappeared. The supreme power rested with the Japanese commander in chief. For developments in 1943, see below.

History. At the end of March, 1943, the Tokyo radio announced that Emperor Hirohito had granted an audience to three Burmese leaders of the Japanese-Burmese administration at Rangoon—Dr. Ba Maw; Maung Mya, Director of Internal Affairs; and Major Gen. Aung Sang, commander in chief of the pro-Japanese Burmese forces. About the same time reports from Burma stated that the Japanese had restricted the activities of the Burmese National Independence party, which they had subsidized for two years prior to their invasion. Burmese nationalists were reported restive at the Japanese delay in granting independence. Apparently seeking to allay Burmese unrest, Premier Tojo of Japan announced that Burma would be granted independence within a year. However he declared that the Shan States and Karenni would not be included in independent Burma. Two of the Shan States—Kengtung and Mong Pan—were ceded by the Japanese to Thailand (which see).

During the summer of 1943 the Japanese established a "Burma Independence Preparatory Committee" of 25 Burmese. On August 1 the Tokyo radio announced that through agreements concluded with Burmese collaborationists the same day the Japanese military administration was abolished and "independence" granted to Burma. The name of the Burma Independence Preparatory Committee was changed to "National Assembly." The members named Dr. Ba Maw as Premier of a new government, which immediately issued a declaration of war against Great Britain and the United States. This was followed by the signature of a treaty of alliance by Ba Maw and the Special Japanese Ambassador, Renzo Sawada, pledging the puppet regime to military, political, and economic cooperation with Japan. Burma thus received the same sort of "independence" as Manchukuo, with final authority resting in the hands of the Japanese Ambassador.

While the Japanese conquerors were seeking by these concessions to win the collaboration of the Burmese, the Anglo-American powers were preparing for the invasion and reconquest of Burma. The British-Indian force which invaded Burma from Assam beginning Dec. 19, 1942, in an effort to capture Akyab and drive the Japanese out of Arakan was halted in the jungles north of Akyab after a 60-mile penetration. The following May it was driven back to its original bases. Meanwhile British and native irregular forces carried out a three-months raid in central and northern Burma, disrupting Japanese communications.

Preparations for a more formidable Allied invasion of Burma reached an advanced stage in the autumn with the establishment of the Southeast Asia Command under Adm. Lord Louis Mountbatten. Meanwhile British and American air forces based in India carried out increasing attacks upon Japanese bases and supply lines in Burma to pave the way for the Allied attack. In May U.S. heavy bombers destroyed an oil refinery at Syriam near Rangoon which the Japanese had rebuilt following its destruction at the time of the British evacuation. By mid-September the U.S. air commander in India declared that nine-tenths of the Japanese military facilities in Burma had been pulverized by Anglo-American air attacks. British and American engi-

neers meanwhile were building the Ledo Road from the Indo-Burmese frontier across the Naga Hills into northern Burma to serve both as an invasion route into Burma and as a future permanent supply route into China. The Japanese were also reported building a railway line southeastward from Moulmein in Burma to a point west of Bangkok in order to connect the railway networks of Burma and Thailand and facilitate the supply of Japanese forces in Burma (see map under THAILAND).

See CHINA, INDIA, and JAPAN under *History*.

BURMA ROAD. See **ROADS AND STREETS**.

BUSES. See **MOTOR VEHICLES; RAPID TRANSIT**.

BUSINESS EDUCATION. See **EDUCATION, U.S. OFFICE OF**.

BUSINESS REVIEW. All-out conversion to war production was achieved by American industry in 1943. For the year as a whole, production for war registered an increase of 54 per cent over 1942. In the final quarter of 1943, war production was estimated by the War Production Board to be 73 per cent higher than the 1942 annual rate. That the performance of the fourth quarter of 1943 represents the approximate peak was indicated by the WPB estimate that such production for the whole of 1944, assuming that the war would continue throughout the year, would be 80 per cent larger than in 1942. See **WAR PRODUCTION BOARD**.

Persistent expansion of munitions production lifted industrial activity to new peaks. The index of industrial production of the Federal Reserve Board, which was drastically revised during the year to make it reflect more fully activity in war industries, rose to 245 per cent of the 1935-39 level by the end of the year. This compared with an average of 199 per cent of the 1935-39 level during 1942. Concentration upon armament production lifted output of durable goods to almost 375 per cent of the 1935-39 level, as compared to an average of 279 for 1942, while production of nondurable goods, in large part for civilian use, showed a much smaller increase. The index of nondurable goods production at the end of 1943 approximated 175, as compared with an average of 158 for all of 1942.

The course of business activity during 1943, and comparisons with preceding years, was as follows:

INDICES OF INDUSTRIAL PRODUCTION FEDERAL RESERVE BOARD

Year and month	Industrial production (physical volume) 1935-39 = 100			
	Total	Manufactures		Minerals
		Durable	Non-durable	
1933.....	69	54	79	76
1934.....	75	65	81	80
1935.....	87	83	90	86
1936.....	103	108	100	99
1937.....	113	122	106	112
1938.....	89	78	95	97
1939.....	109	109	109	106
1940.....	125	139	115	117
1941.....	162	201	142	125
1942.....	199	279	158	129
1943.....	238	361	176	132
January.....	227	336	171	125
February.....	232	344	174	131
March.....	235	351	174	133
April.....	237	356	175	131
May.....	238	359	176	129
June.....	236	358	177	117
July.....	240	361	176	134
August.....	242	365	177	135
September.....	245	370	177	138
October.....	247	376	178	136
November.....	247	377	179	133
December.....	245	374	175	140

The most striking development of the year was not the spectacular further rise in war production, however, but the ability of industry to turn out almost as large a volume of civilian goods as in the previous year. In fact, with the help of relatively large inventories on hand, civilians could buy more goods and services in 1943 than in 1942. The Department of Commerce estimated total civilian expenditures for goods and services at approximately \$90,500,000,000 for 1943, as compared with \$82,000,000,000 the year before. When allowance is made for higher prices, it is probable that physical volumes were little changed for the year.

War Controls. The distribution of raw materials for war production functioned smoothly during most of the year under the Controlled Materials Plan, which provides for allocations of scarce materials between the various war agencies and to civilians on a quarterly basis, after round table discussions among representatives of each claimant agency. The labor shortage, widely feared as the ultimate bottleneck in war production, proved less serious than anticipated because increasing efficiency in war plants reduced manpower needs. The nation's labor force was expanded by some 4,200,000 persons, including those entering the armed forces, during the year ended July, 1943, and it was officially stated that "the supply of workers in the nation as a whole is expected to be more than adequate to meet anticipated needs" for the year ending July, 1944, although labor shortages were serious in some war production centers. See **LABOR CONDITIONS UNDER EMPLOYMENT**. The transportation problem also was solved reasonably well during the year, without the need for resorting to priorities on the railroads (q.v.). The abatement of the submarine threat to shipping and completion of pipelines to carry petroleum to the Eastern Seaboard area helped the railroads to absorb the larger volume of other freight and passenger traffic offered to them, total movements by rail rising to new record levels.

A sharp curtailment in military construction of all kinds and cutbacks in production of tanks, ordnance, and ammunition because output largely exceeded current requirements raised the question whether restrictions on civilian output could be relaxed even though the war was not yet at its most intense stage and the second front had yet to be opened. Strong opposition was manifested within the armed services and some of the Government agencies to any considerable relaxation of such controls. It was feared not only that restrictions, once relaxed, could not be reimposed, but that the psychological effect of such action would be distinctly adverse to the intensity and pace of the whole war effort. Hence, apart from limited relaxation of restrictions on production of a few consumer items such as baby carriages and flatirons, WPB orders drastically limiting the use of strategic materials for civilian goods, and prohibiting production of most consumer durable goods, remained in effect. Relaxations of controls on a larger scale were anticipated only after the successful establishment of a second front in Western Europe.

The cancellation of many war contracts brought up the question of the policies to be pursued in connection with war contract termination, and the disposal of the huge quantities of surplus equipment and materials that would then be left in the hands of the Government. The Office of War Mobilization set up a special unit to tackle this problem, which prepared a Uniform Contract Termination Article to be included in future Government

contracts, and with the consent of the contractor in existing ones. This Uniform Article provided for reimbursement to contractors of their costs plus a profit up to 2 per cent on any processed materials and up to 6 per cent on the total costs allowed. To facilitate both termination and surplus disposal, a Readjustment Division was set up by the Army Service Forces.

Complaints about the distribution of civilian goods under the condition of general scarcity that prevailed were heard frequently through the year. The War Production Board, after extensive consultations with wholesale and retail distributors, drafted a Distribution Order laying down general principles designed to assure fair distribution of available goods, but this order had not been issued by the end of the year. Despite constant pressure for upward revisions of price ceilings from a number of directions during the year, the Office of Price Administration succeeded in keeping wholesale and retail prices on a fairly even keel, although the trend was generally upward. (See articles on the above and other government agencies also, UNITED STATES under *Production*.)

Wholesale and Retail Trade. Consumer purchasing power expanded consistently during 1943, reflecting increases in employment, higher wages and longer working hours, expansion of farm income, and some increase in profits. Income payments to individuals for the year, with December estimated, aggregated \$142,000,000,000, as compared with \$116,000,000,000 in 1942. The distribution of this income in 1943 compared as follows with the year before:

INCOME PAYMENTS TO INDIVIDUALS
(Billions of dollars)

	1942	1943
Salaries and wages.....	80.3	101
Other labor income.....	3.4	3.8
Entrepreneurial income and net rents.....	22	27.6
Interest and dividends.....	10	9.6
Total income payments.....	116	142

Industry could not provide anything like the volume of goods and services that consumers would have purchased with this increased income. However, all retail sales increased during the year, the Department of Commerce reporting sales of all retail stores in the first ten months to be 9.1 per cent higher than the year before. Sales of durable goods declined further because of drastic restrictions on their production, but sales of nondurable goods were generally higher, as shown in the accompanying table:

SALES OF RETAIL STORES

Kind of business	Sales, Jan.-Oct.		
	Amount (millions of dollars)	1942	Per cent change, 1943 from 1942
All retail stores.....	50,930	46,681	+9.1
Durable goods stores.....	7,420	8,433	-12.0
Automotive.....	2,122	2,477	-14.3
Building material and hardware.....	2,672	3,260	-18.0
Housefurnishings.....	1,955	2,198	-11.1
Jewelry.....	671	497	+35.0
Nondurable goods stores.....	43,509	38,248	+13.8
Apparel.....	4,963	3,985	+24.5
Drug.....	2,188	1,808	+21.0
Eating and drinking.....	6,549	5,037	+30.0
Food.....	14,094	12,900	+9.3
Filling stations.....	2,069	2,576	-19.7
General merchandise.....	7,640	6,882	+11.0
Other retail.....	6,008	5,060	+18.7

Source: U.S. Department of Commerce, Bureau of Foreign and Domestic Commerce.

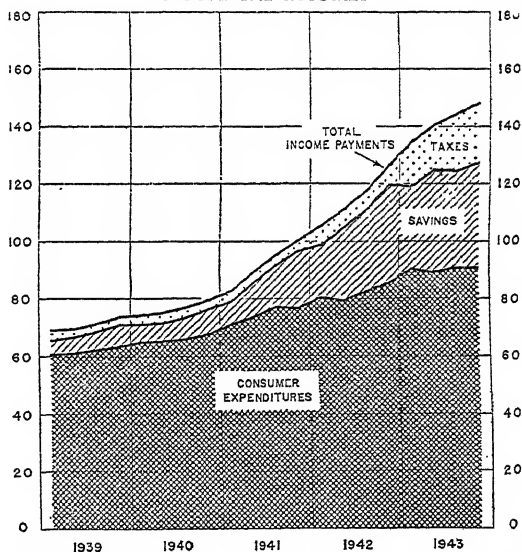
Indices of department store sales compiled by the Board of Governors of the Federal Reserve System, and of dollar values of inventories, fluctuated from month to month during 1943, with comparisons with 1942, as follows:

DEPARTMENT STORE SALES AND STOCKS
(1923-25 = 100)

	Sales		Stocks	
	1942	1943	1942	1943
Jan.....	138	143	95	102
Feb.....	126	168	102	93
March.....	124	136	109	91
April.....	117	128	118	87
May.....	108	125	127	90
June.....	104	129	136	98
July.....	121	142	142	110
Aug.....	130	142	138	114
Sept.....	123	132	125	110
Oct.....	128	140	114	104
Nov.....	138	158	105	98
Dec.....	125	130	101	98

The increase in the dollar volume of retail sales during the year was caused by a number of unusual factors not present in normal times. Prices were generally held down by OPA ceilings, but there was a general upgrading of merchandise as manufacturers tended to cut down output of low-priced lines and expand production of higher grade goods subject to higher price ceilings. Furthermore, there were many instances of substitutions of cheaper materials and packaging where others were

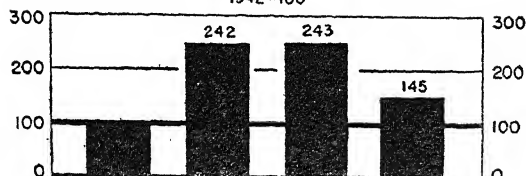
INDIVIDUAL INCOMES



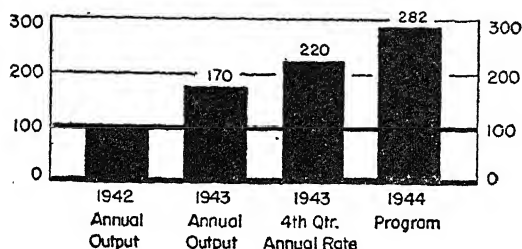
not available, and workmanship of many items tended to suffer because of manpower difficulties encountered by the manufacturers. Retailers found it necessary to curtail delivery and other services given customers, furthermore, because of the labor shortage and restrictions on gasoline and tires. Therefore, consumers generally felt that the cost of living had increased far greater than the 3 per cent rise shown in the index of the Bureau of Labor Statistics, and unit prices received by manufacturers and distributors averaged considerably higher than in 1942. The War Production Board and the Office of Price Administration (q.v.) formulated special measures to stimulate output of lower priced lines by manufacturers, but trade circles were dubious that these would attain the desired objective. (See *LIVING COSTS*.)

SMALL ARMS

1942 = 100



ARTILLERY



Basic Industries. Conditions in basic industries were determined chiefly by shifts in war production. New construction for war declined 31 per cent during 1943 from the 1942 level, and by the fourth quarter of 1943 the decline was 54 per cent from the annual rate of the year before. This decline reflected not only the completion of most industrial plants erected for war work and the War Production Board's policy of not approving new projects of this kind that could not be completed in 1943, but also a sharp decline in work on military and naval installations and camps. Construction contracts in 37 States east of the Rockies were estimated by the F. W. Dodge Corporation at \$3,274,000,000 for 1943, as compared with \$8,255,000,000 for 1942. Of the total for 1943, \$2,695,000,000 consisted of publicly-owned building and \$579,000,000 of private construction. A good deal of unemployment developed among building workers, and many building materials also became freely available as the volume of construction declined. However, restrictions on civilian production were not relaxed because the labor thus released and many of the materials might be needed for war purposes after establishment of the second front. See **CONSTRUCTION INDUSTRY**.

Minerals production increased but slightly during the year, since mines had generally been

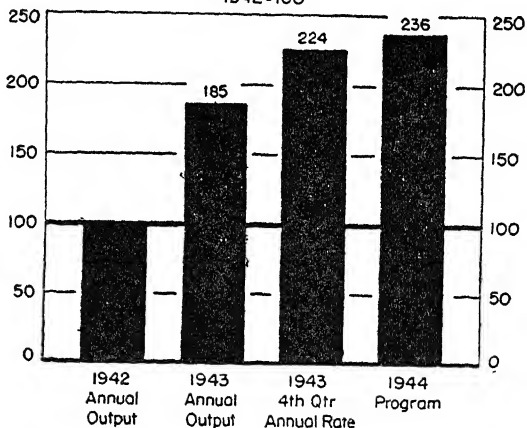
worked at capacity in 1942. As war needs passed their peak, an easing of the supply situation in aluminum, copper and steel, the three major raw materials for war, occurred late in 1943. The Government accumulated large stockpiles, particularly of aluminum, and by the end of the year steps were being taken to cut down production of this metal. A more favorable supply situation was reflected also in a resumption of publication of some metal statistics at the end of the year. See articles on important minerals.

The iron and steel industry (q.v.) was affected adversely by coal strikes, but total production for the year aggregated 89,000,000 tons of ingots, as compared with 86,000,000 tons for 1942. Steel supplies were sufficiently adequate by the end of the year to raise the question of halting construction on new producing facilities not yet completed.

The machinery industry, like construction, was greatly influenced by the change in the war program incident to the completion of plant construction and concentration upon a maximum output of munitions. Shipments of machine tools declined from \$132,000,000 for December, 1942, to \$71,-

TOTAL MUNITIONS PRODUCTION

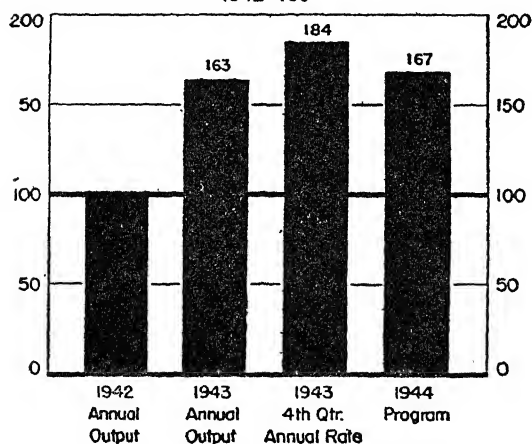
1942 = 100



000,000 for November, 1943, the lowest monthly total reported in several years. Other types of industrial machinery manufacture showed a similar declining trend. See **MACHINE BUILDING**; **MACHINERY INDUSTRY**.

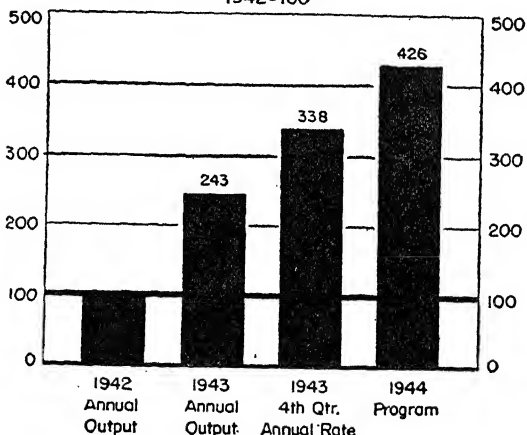
AIRCRAFT

1942 = 100



GROUND ARMY ORDNANCE AND SIGNAL

1942 = 100

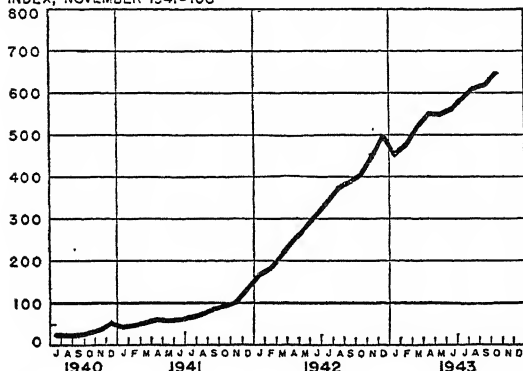


Armament Production. Production for war rose at a more gradual pace during 1943 than in 1942. Substantial increases were made in every major branch of munitions production for the year as a whole. However, by the fourth quarter of the year a substantial decline had occurred in tank production, the railway locomotive companies shifting back to making engines for Russia and for liberated areas in North Africa and Europe. The War Production Board made public statistics on production of major types of munitions, and the program for 1944, as shown in the accompanying charts. (For fuller report, see WAR PRODUCTION BOARD.)

The outstanding achievement in armament production during the year was the output of 86,000 aircraft of all types, which compared with 49,000 produced in 1942. Furthermore, a far larger proportion of the 1943 output was in heavy bombers and fighters, and a much smaller proportion of trainer planes. The aircraft manufacturing industry became the largest in the country in 1943, accounting for an aggregate output of the value of \$20,000,000,000 during the year, of which \$12,000,000,000 was accounted for by aircraft plants alone.

MUNITIONS PRODUCTION INDEX

INDEX, NOVEMBER 1941=100

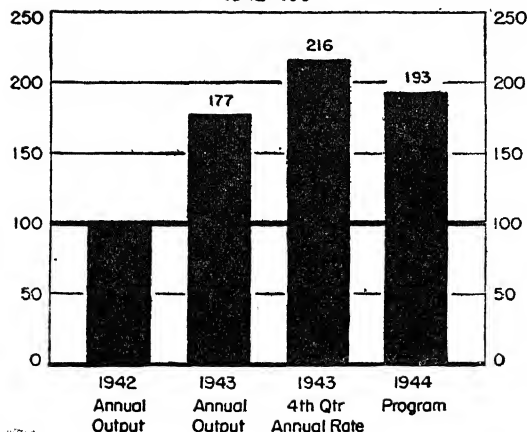


Includes ships, planes, tanks, guns, ammunition, and all field equipment.

The industry employed 2,500,000 persons at the end of the year. (See AERONAUTICS.) An equally impressive record was achieved by the nation's shipyards, which built 1,896 merchant ships with a total deadweight tonnage of 19,238,000 in 1943.

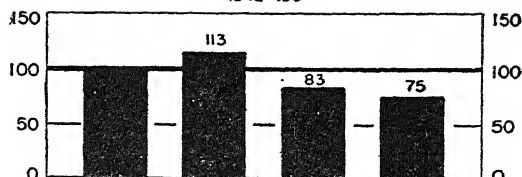
NAVY SHIPS

1942=100

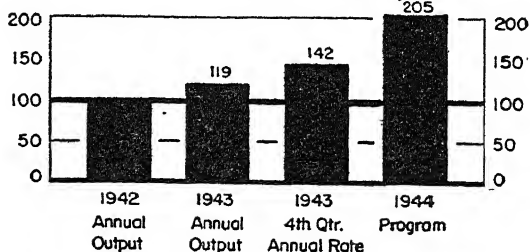


TANKS

1942=100



TRUCKS (OVER 2½ TONS)

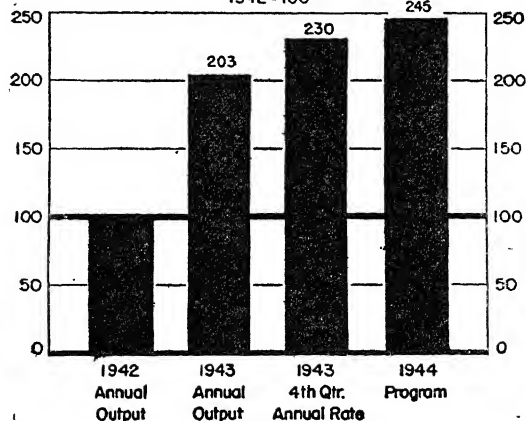


The merchant fleet produced in American shipyards during 1943 was 20 per cent greater than all the merchant fleets of the world combined in 1939. Naval shipbuilding was equally impressive, but its figures are a military secret in time of war. (See NAVAL PROGRESS; SHIPBUILDING.)

Other Industries. Civilian goods industries had to cope with increasing manpower shortages and with inability to get some of the materials they required. Furthermore, difficulties were encountered in obtaining needed machinery and replacement parts in many instances. In the face of these obstacles, the total volume of production compared favorably with 1942. It should be noted, however, that a considerable part of the output of many of these industries, and in the case of such basic items as cotton goods some 60 per cent, was required for military and war production use. In fact, so great were military textile requirements that the War Production Board required all mills to devote a specified proportion of their output to military and other preferential orders, thus greatly limiting the quantities that would be sold for ordinary civilian use. The level of production in a number of manufacturing industries late in 1943, as compared with 1942, is shown in the table on p. 94, the index numbers being percentages of the 1935-39 average. See the articles on various branches of industry.

MARITIME COMMISSION

1942=100



PRODUCTION IN LEADING INDUSTRIES (Federal Reserve Bulletin)

	1942	1943
Textiles.....	148	141
Leather.....	116	110
Dairy Products.....	148	146
Meat.....	162	182
Alcoholic Beverages.....	138	135
Tobacco.....	135	134
Paper Products.....	132	143
Printing & Publishing.....	108	111
Refined Petroleum Products.....	149	205
Paints.....	122	137
Soap.....	117	123
Rayon.....	188	221
Rubber Products.....	180	231

Commodity Prices. Price stabilization was more successful in 1943 than in preceding years, the wholesale price index of the Department of Labor rising less than 2 per cent for the year. The Office of Economic Stabilization (q.v.) was responsible for the price and wage control program, under Judge Vinson as director, but all production and stabilization agencies were made subject to the Office of War Mobilization, of which Justice James S. Byrnes was named director.

MAJOR WHOLESALE COMMODITY PRICES (End of December)

Commodity	1942	1943
Wheat #2, K.C., bu.....	\$1.33 1/4	\$1.64 1/4
Corn #3, yellow, Chi., bu.....	.95 3/4	1.12
Flour, bbl.....	6.70	3.75
Pork loins, lb.....	.28	.25 1/4
Butter, extra, lb.....	.47	.41 1/4
Eggs, firsts, doz.....	.37 3/4	.28 1/2
Potatoes, white, bag.....	2.45	2.75
Canned peaches, doz., factory.....	2.25	2.25
Sugar, Cuban raw, lb.....	.0374	.0374
Coffee, Santos, lb.....	.13 3/4	.13 3/4
Cocoa, Accra, lb.....	.091	.091
*Cotton, Galveston, lb.....	.1996	.1965
Print cloth, yard.....	.08971	.08971
Wool, territory, Boston, lb.....	1.12	1.17
Silk, raw, lb.....	3.08	3.08
Rayon, viscose, lb.....	.55	.55
Pig iron, Valley, ton.....	24.00	24.00
Steel bars, Pittsburgh, 100 lb.....	2.15	2.15
Copper, lb.....	.12	.12
Zinc, E. St. Louis, lb.....	.08 1/4	.08 1/4
Lead, lb.....	.065	.065
Sulphuric acid, ton.....	16.50	16.50
Soda, caustic, 100 lb.....	2.00	2.00
Southern pine, K.C., 1,000 ft.....	49.00	52.50
*Turpentine, gal.....	.69 1/4	.82 1/4
Linseed oil, lb.....	.128	.156
Coal, bituminous, ton, Clearfield.....	2.70	3.10
Coal, anthracite, ton.....	6.75	8.00
Petroleum, crude, K-O, bbl.....	1.17	1.17
Bunker oil, C., bbl.....	1.65	1.65
Rubber, lb.....	.22 1/4	.22 1/4
Hides, heavy native, Chi., lb.....	.15 1/2	.15 1/2

Source: Journal of Commerce, quotations for New York City unless otherwise indicated.

* Only products without ceilings are cotton and turpentine.

In the face of Congressional and labor opposition, the Administration took a particularly drastic step to halt the rise in commodity prices and wages with the issuance of the "Hold-the-Line" order on Apr. 8, 1943. This order barred increases in commodity prices, and froze salaries and wages at the October, 1942, level, except to correct inequalities and substandards of living. It also barred changes in jobs to secure higher pay. Subsequently, the Administration sought to bring prices of several foods back to the October, 1942, level, to head off union opposition to wage stabilization efforts, under a rollback and subsidy program. Meats, dairy products, fruits, and vegetables were chiefly affected by this program. Retail price ceilings were reduced, and simultaneously subsidy payments were paid to processors so that they would not have to lower the prices they pay agricultural producers. Farm organizations, as well as representatives from agricultural States, bitterly opposed this rollback and sub-

sidy program, claiming that it was an unnecessary sop to labor and that it would lead to intolerable regimentation of agriculture.

Wholesale price indices for recent years, and for each month of 1942 and 1943, are tabulated in the accompanying table:

WHOLESALE PRICE MOVEMENT (1926 = 100)

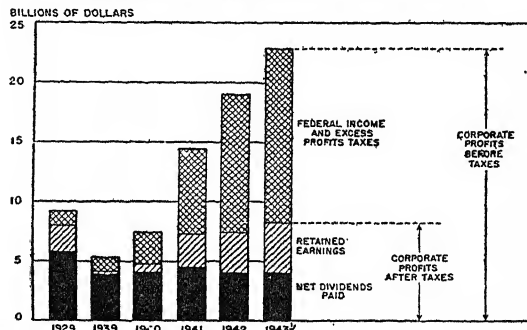
Years	Combined Index	Farm Products	Food	Other Commodities
1929.....	95.3	104.9	99.9	91.6
1932.....	64.8	48.2	61.0	70.2
1938.....	78.6	68.5	73.6	81.7
1939.....	77.1	65.3	70.4	81.3
1940.....	78.6	67.7	71.3	83.0
1941.....	87.3	82.4	82.7	89.0
1942.....	98.8	105.9	99.6	95.5
1943.....	103.1	122.6	106.8	96.9

Months	Combined Index	Farm products only
	1942	1943
January.....	96.0	101.9
February.....	96.7	102.5
March.....	97.6	103.4
April.....	98.7	103.7
May.....	98.8	104.1
June.....	98.6	103.8
July.....	98.7	103.2
August.....	99.2	103.1
September.....	99.6	103.1
October.....	100.0	103.0
November.....	100.3	102.6
December.....	101.0	102.9
Year.....	98.8	103.1

With price ceilings in effect, retail prices were generally unchanged during the year, except for certain individual readjustments ordered by OPA to correct inequalities, or to reflect higher wholesale prices. A number of food prices were reduced as a result of the rollback program. See **FOOD INDUSTRY, etc.; LIVING COSTS.**

Industry Earnings. Corporate profits after taxes aggregated approximately \$8,000,000,000 during 1943, as compared to \$7,200,000,000 in 1942. The increase in profits reflected further increases in war production and the tendency for producers to raise efficiency and lower costs as their experience with munitions manufacture increased.

INCREASE IN PROFITS AND TAX LOAD



The Department of Commerce estimated that earnings before taxes exceeded \$22,000,000,000 in 1943, as compared with \$19,200,000,000 in 1942, while Federal income and excess profits taxes were well over \$14,000,000,000, as compared to some \$12,000,000,000 a year before.

The above profit figures are after taxes, but before reserves for contingencies which many corporations set aside, but which the Treasury does not allow as deductions from taxable income under existing law. Corporate annual reports show that a considerable part of the profits as reported above is set aside in reserves for postwar conversion, for inventory losses, and for other specified and un-

specified postwar contingencies. The actual extent to which these reserves will be needed, of course, will depend upon the policies which the Government will finally adopt for termination of war contracts, for reconversion of industry, for the payment of severance wages to discharged employes and other aspects of the postwar transition.

Complaints about the renegotiation of war contracts by the Price Adjustment Boards of the Army, Navy, Maritime Commission, and Treasury, despite recognition of the fact that the personnel of the Boards generally endeavored to do a fair and conscientious job, led to the introduction of bills in Congress to modify or repeal war contract renegotiation legislation. Amendments designed to assure war contractors the right to appeal to the courts against renegotiation settlements proposed by the Price Adjustment Boards, to exempt many types of contracts from renegotiation, and to make renegotiation apply to profits after taxes, rather than before, were attached to the 1943 revenue bill, but final action on this measure was not taken by the end of the year. Repayments to the Government as a result of renegotiation of war contracts exceeded \$5,000,000,000, and it was estimated that a net amount of about \$1,500,000,000 was recovered after allowing for taxes that would have been paid upon such refunded profits.

Failures and Reorganizations. Business failures declined to the lowest level in a number of years, although many small concerns liquidated voluntarily. A high level of consumer purchasing power and capacity production in industries working for war cut sharply both the number of failures and the liabilities involved. Statistics of failures, issued by Dun & Bradstreet, for the first eleven months of 1943 compared with the corresponding period of 1942 as follows:

COMMERCIAL FAILURES—BY DIVISIONS
OF INDUSTRY

	Number		Current Liabilities (thousands of dollars)	
	1942	1943	1942	1943
Manuf. and Mining..	1,419	539	29,203	18,220
Wholesale Trade....	716	241	10,836	2,891
Retail Trade.....	5,582	1,693	38,029	12,161
Construction.....	701	379	9,043	5,208
Commercial Services.	481	224	6,702	4,804
Total.....	8,899	3,076	93,813	43,284

It was estimated that a decline of about 200,000 occurred in the total number of business concerns in the United States during 1942-43, chiefly because of a subnormal number of new promotions to replace concerns voluntarily liquidated. This was similar to what happened during the last World War. With the end of hostilities and the return of millions of persons from the armed forces, along with relaxation of restrictions on civilian industry it is expected that promotions of new businesses will be at a very high level for several years, as was the case in 1919 and 1920. For railroad reorganizations, see RAILWAYS.

Foreign Trade. The foreign trade of the United States was at a very high level because of lend-lease shipments. Apart from lend-lease, export trade was limited by the shortage of shipping and limited supplies of goods available, while imports for other than war purposes were limited by shipping and other restrictions. Without lend-lease, imports were larger than exports, giving the United States an unfavorable balance of trade on a cash basis. See TRADE, FOREIGN.

Foreign traders urged the relaxation of restrictions on trade with Latin America and with North

Africa, claiming that many Government controls were being kept in force longer than necessary, so that they were being placed at a disadvantage as compared with British exporters in some markets. The Government set up the Foreign Economic Administration (q.v.) during the year to take over the old Board of Economic Warfare and other Government agencies concerned with economic activities abroad. It was felt, however, that greater integration between foreign trade promotion agencies and the State Department was necessary to protect American trade interests for the postwar period.

World Business Trends. Business conditions in the British Empire for the most part resembled closely those in the United States during the year. Production for war was maintained at a high level, but consumer goods supplies became somewhat more plentiful because of lend-lease and the greatly improved shipping situation. The Axis countries, on the other hand, suffered from the growing success of the arms of the United Nations, and the relentless blockade to which they were subjected. Severe suffering throughout Italy accompanied the military collapse of that country and heavy fighting on Italian soil. The Allied Military Government ameliorated the situation in the territory liberated from German occupation to some extent.

Latin America was generally prosperous due to heavy exports of many staple commodities at high prices to the United Nations, considerable spending by this country in nations that have joined us in the war, and the stimulation to domestic manufactures resulting from inability to import manufactured goods in desired quantities from abroad. Large exports and curtailed imports gave these countries a favorable balance of payments, although a number of them remained in default on bond issues they had sold abroad. Latin American central banks generally gained gold and dollar exchange under these conditions, thus building up their foreign buying power in anticipation of the postwar period when consumer goods and industrial railroad equipment can again be purchased freely. Inflation control was a major problem in all of these countries, since price stabilization is far more difficult under the less-developed economic conditions prevailing there.

Commodity price movements in major countries compared as follows:

UNITED STATES AND FOREIGN WHOLESALE PRICE
INDEX NUMBERS

	October	
	1943	1942
United States.....	b 103.0	100.0
Canada (Dom. Bur.).....	b 101.9	96.6
United Kingdom.....	a 167.0	164.4
	Aug. 1942	
Costa Rica.....	a 162.0	132.0
Mexico (City).....	a 150.0	122.0
	July, 1943	July, 1942
Germany.....	a 109.0	108.0
Switzerland.....	a 205.0	200.0
Peru.....	a 205.0	180.0
Denmark.....	a 194.0	193.0
Sweden.....	a 179.0	177.0
Australia.....	a 139.0	135.0
	June, 1943	June, 1942
Hungary.....	a 205.0	173.0
New Zealand.....	a 145.0	137.0
Spain.....	a 175.0	157.0

(a) Jan. to June 1939 = 100. (b) 1926 = 100.

A crop failure caused a severe food shortage in large parts of eastern India. Failure to take remedial measures in time brought on a severe famine in Bengal. While India was able to repatriate all government bonds outstanding in London, and

also accumulated very large sterling balances under the terms of her agreement with Great Britain covering the division of war costs, commodity prices tended to rise to a distressing extent as consumption by troops of the United Nations and inability to import rice and other staples from nearby areas that had been occupied by Japan created internal shortages.

A review of the agricultural situation is to be found under AGRICULTURE and of labor under LABOR CONDITIONS. See the countries under *Production*; BANKS AND BANKING; CONSUMERS' COOPERATION; FINANCIAL REVIEW; POSTWAR PLANNING; TRADE, FOREIGN.

JULES I. BOGEN.

BUTADIENE, BUTYL. See RUBBER.

BWC. See WAR COMMUNICATIONS, BOARD OF.

BYELO RUSSIAN SOVIET SOCIALIST REPUBLIC. Same as WHITE RUSSIAN SOVIET SOCIALIST REPUBLIC.

CAA. See CIVIL AERONAUTICS ADMINISTRATION.

CAB. See CIVIL AERONAUTICS BOARD.

CABLE. See COMMUNICATIONS, especially under *Telegraphy*.

CADMIUM. See CHEMISTRY.

CAIRO CONFERENCE. See CHINA, GREAT BRITAIN, JAPAN, and U.S.S.R. under *History*; UNITED NATIONS; UNITED STATES; WORLD WAR.

CALIFORNIA. A Pacific State. Area: 158,693 sq. mi. Population: 6,907,387 (1940 census); 7,397,456 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Earl Warren (Rep.), inaugurated in January, 1943, for a four-year term; Lieutenant Governor, Frederick F. Houser; Secretary of State, Frank M. Jordan; Attorney General, Robert W. Kenny.

See AQUEDUCTS; BRIDGES; CHROMIUM; DAMS; MERCURY; PRISONS under *Prison Scandals and Work Leaves*; TUNGSTEN.

CAMBODIA. See FRENCH INDO-CHINA.

CAMEROONS, British. A territory in West Africa, administered by Great Britain under a League of Nations mandate conferred on July 20, 1922. Area, 34,081 square miles. Population (1939), 868,637. Palm oil, cacao, rubber, and bananas were the main products. Trade (1939): imports £225,907; exports £424,871. Finance (1939): revenue £109,264; expenditure £183,912. Shipping (1939): 510,690 tons entered and cleared the ports of Victoria and Tiko. During 1942 a member was appointed to represent the people of British Cameroons in the Legislative Council of Nigeria. Administrator, the Governor of Nigeria.

CAMEROUN, French. A territory in western Africa, mandated to France by the League of Nations in

1922. Area, 162,934 square miles. Population (Jan. 1, 1940), 2,609,000. Capital, Yaoundé (20,000 inhabitants). Education (1939): 160 schools and 16,262 pupils. Chief products: groundnuts, maize, palm oil, cacao, gold, diamonds, hides, timber, and ivory. Livestock (1939): 900,000 oxen, 25,000 asses. Communications: 3,105 miles of roads, 314 miles of railways. Trade (1938): imports 215,212,000 francs; exports 251,959,000 francs. Budget (1938): revenue 139,439,747 francs; expenditure 118,328,574 francs (franc averaged \$0.0288 for 1938). French Cameroun adhered to the Free French (later Fighting French) movement in August, 1940, and thus came under the jurisdiction of the French Committee of National Liberation at Algiers in 1943.

CAMOUFLAGE. See AQUEDUCTS; CHEMISTRY under *Paint*. For *Electrical Camouflage*, see COMMUNICATIONS under *Radio*.

CAMP OPERATIONS DIVISION. See SELECTIVE SERVICE SYSTEM under *Conscientious Objectors*.

CAMPS. See SANITATION; WATER SUPPLY.

CANADA. A Dominion of the British Commonwealth of Nations, comprising nine provinces and two territories. (See separate articles on the provinces and territories.) Capital, Ottawa.

Area and Population. The land area, and the census populations of June 1, 1931, and June 1, 1941, are shown by provinces and territories in the accompanying table. The estimated population of Canada on June 1, 1943, was 11,812,000 (11,654,000 on June 1, 1942).

AREA AND POPULATION OF CANADA

Provinces and territories	Land area, sq. miles	Population	
		1931	1941
Prince Edward Island....	2,184	88,038	95,047
Nova Scotia.....	20,743	512,846	577,962
New Brunswick.....	27,473	408,219	457,401
Quebec.....	523,860	2,874,774	3,331,832
Ontario.....	363,282	3,431,683	3,787,655
Manitoba.....	219,723	700,139	729,744
Saskatchewan.....	237,975	921,785	895,992
Alberta.....	243,800	731,605	796,169
British Columbia.....	359,279	694,263	817,861
Yukon Territory.....	205,346	4,230	4,914
Northwest Territories....	1,258,217	9,204	12,028
Total.....	3,466,882	10,376,786	11,506,655

There were 5,900,536 males and 5,606,119 females at the 1941 census. Of the white population in 1941, 5,715,904 were of British origin (English, 2,968,402; Scottish, 1,403,974; Irish, 1,267,702; other, 75,826) and 3,483,038 of French origin. In 1941, 5,254,239 inhabitants resided in rural districts and 6,252,416 in urban communities. Populations of the chief cities in 1941 (final figures), with 1931 figures in parentheses, were: Montreal, without suburbs, 903,007 (818,577); Toronto, 667,457 (631,207); Vancouver, 275,353 (246,593); Winnipeg, 221,960 (218,785); Hamilton, 166,337 (155,547); Ottawa, 154,951 (126,872); Quebec, 150,757 (130,594); Windsor, 105,311 (98,179); Edmonton, 93,817 (79,197); Calgary, 88,904 (83,761); London, 78,264 (71,148); Halifax, 70,488 (59,275); Verdun, 67,349 (60,745); Regina, 58,245 (53,209); Saint John, 51,741 (47,514); Victoria, 44,068 (39,082); Saskatoon, 43,027 (43,291); Three Rivers, 42,007 (35,450).

Immigration declined from 16,994 arrivals in 1939 to 7,576 in 1942; in the latter total were 5,098 from the United States and 2,259 from the United Kingdom. During the year ended June 30, 1943, 14,541 persons moved permanently from Canada to the United States and 5,306 moved permanently from the United States to Canada. Up to Mar. 31,

1941, almost 6,000 child refugees and 1,200 mothers from Great Britain arrived in Canada. Living births in 1942 numbered 271,981 (23.4 per 1,000); deaths, 112,864 (9.7 per 1,000); marriages, 127,368 (10.9 per 1,000). The birth rate was highest in Quebec (28.0 per 1,000) and lowest in Saskatchewan (20.0 per 1,000).

Education and Religion. At the 1931 census, 95.7 per cent of all persons over 10 years could read and write. Of a total school population of 2,433,370 in 1941, 2,197,804 were in provincially-controlled schools (2,075,909 in ordinary and technical day schools), 112,884 in privately-controlled schools, 17,425 in Dominion Indian schools, and 105,257 in universities and colleges (48,835 in courses of university standard).

The principal religious groups in Canada at the 1941 census were: Roman Catholics, including 185,657 Greek Catholics, 4,986,552; United Church (Methodists, Congregationalists, and Presbyterians), 2,204,875; Anglicans, 1,751,188; Presbyterians (not included in United Church), 829,147; Baptists, 483,592; Lutherans, 401,153; Jewish, 168,367. Of the 2,927,990 Canadians of French origin in 1931, 2,849,096 were Roman Catholics.

Production. The estimated gross value of production in 1941 was \$9,250,795,729 and the estimated net value \$4,720,073,033. Of the net value, manufactures accounted for 55.19 per cent, agricultural products 20.14 per cent, mining 10.55, forestry 8.93, construction 5.71, and electric power 3.88. It was estimated that at Jan. 30, 1943, there were 625,000 Canadian males in the armed forces, 820,000 in war industries, 1,020,000 in agriculture, 683,000 in essential civilian industry and 787,000 in less essential industry. The estimated money national income increased from \$4,566,000,000 in 1939, the latest prewar year, to \$7,500,000,000 (preliminary) for 1942. See ALUMINUM; ASBESTOS; COAL; GOLD; IRON AND STEEL; MERCURY; NICKEL.

Agriculture. Preliminary returns of the 1941 census of agriculture showed 734,760 occupied farms with 1,246,622 farm workers of whom 993,324 were members of the farm operators' families. The total area sown to field crops was 55,895,937 acres as against 57,925,483 acres in 1931; wheat acreage decreased from 26,355,136 in 1931 to 21,881,871 in 1941. The gross value of agricultural production in 1942 was estimated at \$2,086,361,000 (\$1,379,386,000 in 1941). Of the 1942 total, field crops accounted for \$1,145,778,000; farm animals, \$409,192,000; milk production, \$273,991,000; poultry and eggs, \$131,282,000.

Estimated production (third estimate) of grain crops in Canada in 1943, with 1942 production in parentheses, was (in bushels): Wheat, 293,660,000 (556,134,000); oats, 482,000,000 (528,450,000); barley, 215,562,000 (259,156,000); rye, 7,143,000 (24,742,000); buckwheat, 6,243,000 (5,207,000); mixed grains, 35,656,000 (68,622,000); flaxseed, 17,911,000 (14,992,000); shelled corn, 7,775,000. Yields of root and other crops were: Potatoes, 43,541,000 cwt. in 1943 (42,882,000 in 1942); turnips, etc., 35,690,000 cwt. (32,866,000); hay and clover, 17,238,000 tons (16,061,000); alfalfa, 3,891,000 tons (3,731,000); fodder corn, 4,097,000 tons (4,401,000); grain hay, 1,259,000 tons (1,668,000); sugar beets, 473,300 tons (716,000). The total gross farm value of all field crops produced on 60,345,600 acres in 1943 was \$1,104,065,000, compared with \$1,179,073,000 from 60,809,200 acres in 1942.

The value of all livestock at the 1941 census (preliminary returns) was \$609,470,373, of which domestic animals accounted for \$579,795,536 and

poultry and bees for \$29,674,837. There were on Canadian farms on June 1, 1943, 2,775,000 horses, 9,665,000 cattle, 8,148,000 swine, and 3,459,000 sheep. The 1942 wool clip was 12,867,000 lb., worth \$3,283,000.

Manufacturing. In 1941 Canada had 26,293 manufacturing establishments (25,513 in 1940), with a capital of \$4,905,503,966 (\$4,095,716,836 in 1940) and 961,178 employees (762,244 in 1940). Salaries and wages paid in 1941 totaled \$1,264,862,643 (\$920,872,865 in 1940); cost of materials, \$3,296,547,019 (\$2,449,721,903); net value of products, \$2,605,119,788 (\$1,942,471,238); gross value of products, \$6,076,308,124 (\$4,529,173,316). Of the 1941 gross value of manufactured products, iron goods accounted for \$1,483,169,765 (\$906,103,055 in 1940); vegetable products, \$897,978,448 (\$738,432,443); wood and paper products, \$892,936,114 (\$750,631,337); nonferrous metal products, \$726,348,447 (\$540,781,367); animal products, \$708,220,447 (\$546,336,264); textiles and textile products, \$666,438,539 (\$547,451,110); nonmetallic minerals, \$324,289,898 (\$255,624,328); chemicals and allied products, \$304,400,569 (\$193,890,338). These statistics reflect the great expansion of war production, which continued at an increased tempo in 1942 and 1943 (see *History* below).

Output of newsprint in 1942 was 3,257,180 tons; wood pulp, 5,600,000 tons; electric power, 37,110,000,000 kilowatt-hours (33,318,000,000 in 1941); cement, 9,126,041 bbl. (8,368,711 in 1941); pig-iron, 1,975,014 short tons (1,528,053 in 1941); steel ingots and castings (excluding ferro-alloys), 3,121,361 short tons; passenger automobiles for sale in Canada, about 8,300 in 1942 (81,700 in 1941 and 94,633 in 1940). The value of orders held by aircraft factories in 1943 exceeded that of any other industry; shipbuilding, in which the number of men employed increased from 1,500 in mid-1939 to 89,043 on Sept. 1, 1943, ranked second in the total value of orders. Indices showing the average number of persons employed in manufacturing (Base: 1926 = 100) were 112.3 for 1939, 131.3 for 1940, 168.4 for 1941, 206.5 for 1942, and 231.3 at Oct. 1, 1943. See *History*.

Mining. The value of mineral production rose from the record level of \$560,241,290 in 1941 to \$566,768,672 in 1942. Gold production was 4,841,306 fine oz. valued at \$186,390,281; silver, 20,695,101 oz., \$8,726,296; coal, 18,865,030 short tons, \$62,897,581; natural gas, 45,697,359 M cu. ft., \$13,301,655; crude petroleum, 10,364,796 bbl., \$15,968,851; cement, 9,126,041 bbl., \$14,365,237. Statistics on production of vital war minerals were withheld for military reasons. However the combined value of copper, nickel, lead, and zinc production was \$167,426,611 in 1942; of asbestos, fluorspar, graphite, magnesitic dolomite, mica, sulfur, and strontium minerals, \$26,365,058; of precious metals other than gold and silver, \$19,177,782.

Forest Products. The total value of primary forest products in 1941 was \$213,163,089 (\$194,567,875 in 1940). Lumber production in 1941 was 4,941,084 M ft. board measure, worth \$129,287,703; total sawmill products, \$163,412,292; pulp and paper products, \$334,429,175. See PAPER AND PULP.

Fisheries. The yield of all fisheries was valued at \$75,040,919 in 1942 and \$62,258,997 in 1941. The catch of sea fisheries amounted to \$65,933,167 in 1942 (\$54,325,858 in 1941). Of the 1942 production, salmon accounted for \$22,926,861; herring, \$10,886,522; cod, \$9,962,312; lobster, \$5,084,558.

Tourist Trade. The estimated expenditures of U.S.

tourists in Canada were \$79,000,000 in 1942 (\$107,000,000 in 1941). Visitors from other countries spent \$2,900,000 in 1942 and \$4,000,000 in 1941. Canadian visitors to the United States spent \$24,400,000 in 1942 (\$18,300,000 in 1941).

Foreign Trade. A record level was reached in 1942. Total imports rose to \$1,644,241,933 (\$1,448,791,650 in 1941); total exports to \$2,385,466,046 (\$1,640,454,541 in 1941). Exports of domestic produce in 1942 were \$2,363,773,296 (\$1,621,003,175 in 1941). Of the 1942 imports, \$1,304,680,000 came from the United States (\$1,004,498,000 in 1941) and \$273,777,000 from the British Empire (\$359,942,000 in 1941).

Exports to the United States were \$885,523,000 in 1942 (\$599,713,000 in 1941); to the United Kingdom, \$741,717,000 (\$658,228,000 in 1941); Egypt, \$213,128,000 (\$79,195,000 in 1941); British India and Burma, \$168,318,000 (\$40,750,000 in 1941); Australia, \$78,866,000 (\$37,290,000 in 1941); Newfoundland, \$50,832,000 (\$31,873,000 in 1941); Russia, \$36,603,000 (\$5,331,000 in 1941); New Zealand, \$30,336,000 (\$9,981,000 in 1941); British South Africa, \$27,543,000 (\$36,095,000 in 1941). Leading export items in 1942 were: Automobiles, \$194,311,611 (\$128,760,269 in 1941); newsprint, \$141,065,618 (\$154,356,543); wheat, \$121,817,692 (\$161,856,075); meats, \$110,428,586 (\$84,177,848); wood-pulp, \$95,266,873 (\$85,897,736); planks and boards, \$80,115,443 (\$74,205,325); automobile parts, \$62,960,913 (\$20,239,344); fish, \$47,928,971 (\$39,512,299).

See TRADE, FOREIGN.

Finance. Budget operations of the Dominion Government for the fiscal years 1938-39 to 1943-44 are shown in the accompanying table.

DOMINION FINANCES
(Thousands of Canadian dollars)

Years ended March 31	Total revenues	Ordinary expendi- tures	Total expendi- tures	Surplus (+) or deficit (-)
1938-39....	\$502,171	\$413,032	\$553,063	-\$50,892
1939-40....	562,093	398,323	680,794	-118,700
1940-41....	872,170	390,629	1,249,601*	-377,432*
1941-42....	1,488,536	444,778	1,885,066*	-396,530*
1942-43....	2,249,496	561,251	4,387,124*	-2,137,628*
1943-44*..	2,527,200	610,000	4,500,000*	-1,972,800*

* Excluding special financing for exports to the United Kingdom, amounting to about \$300,000,000 in 1940-41, \$900,000,000 in 1941-42, \$1,050,000,000 in 1942-43, and \$1,000,000,000 in 1943-44.

† Estimates.

According to the Minister of Finance, direct war expenditure amounted to \$6,012,775,500 from Sept. 3, 1939, to Mar. 31, 1943. The gross public debt of the Dominion rose from \$3,638,320,816 on Mar. 31, 1939, to \$9,228,252,012 on Mar. 31, 1943; the net debt was \$2,152,559,314 and \$6,182,849,101 respectively. The Canadian dollar (used in statistics throughout this article) exchanged on the free market at an average of U.S. \$0.8514 in 1940, \$0.8735 in 1941, \$0.884 in 1942, and \$0.894 in October, 1943. The official exchange rate remained at U.S. \$0.9091.

Shipping. The merchant marine in 1940 numbered 8,396 vessels of 1,292,692 registered tons. War-time restrictions preclude the publication of figures for registered shipping since 1940. Production of the shipyards increased from 1,200 tons of merchant shipping in 1938 to about 900,000 in 1942. In September, 1943, Canada launched her 620th war-time ship. Sea-going shipping entering Canadian ports during the calendar year 1942 aggregated 25,640,763 registered tons (31,452,400 in 1941); coastwise shipping entered, 43,990,764 tons (48,111,082 in 1941). Statistics of ship clearances were withheld. See SHIPBUILDING; SHIPPING.

Railways, etc. With 42,339 miles of line in operation, the steam railways in 1942 carried 47,596,602 passengers and 134,674,537 tons of freight (29,779,241 passengers and 116,808,091 tons of freight in 1941). Railway earnings aggregated \$663,610,590 and expenses \$485,783,584 in 1942. The government-owned Canadian National Railways, which had 23,494 miles of single-track line in 1942, reported a surplus on 1942 operations of \$25,063,268. Highways in 1941 extended 561,489 miles, of which 120,971 miles were surfaced and 204,646 miles of improved earth. See ALASKA HIGHWAY for Alaska-Canada road built in 1942.

Commercial air traffic statistics for 1942, with 1941 figures in parentheses, were: Revenue miles flown, 12,781,318 (11,800,661); revenue passengers, 214,691 (193,097); revenue freight, 11,434,570 lb. (14,804,681); mail, 5,258,071 lb. (3,388,634). In 1943 Canada ranked next to the Soviet Union in the volume of nonmilitary air freight moved. The transatlantic air-mail service from Canada to Britain via Newfoundland and Eire was resumed in the autumn of 1942. See RAPID TRANSIT; ROADS AND STREETS; TUNNELS.

Government. Executive power is exercised in the King's name by the Governor-General of Canada, acting through a responsible ministry. Legislative power rests in a parliament of two houses—a Senate of 96 members appointed for life by the Governor-General on advice of the Cabinet and a House of Commons of 245 members elected for five years (unless the government is sooner dissolved) by popular male and female suffrage. The nine Provinces enjoy a large measure of local autonomy, there being a separate parliament and administration for each. A lieutenant-governor appointed by the Governor-General-in-Council heads each provincial executive. Governor-General in 1943, the Earl of Athlone (installed June 21, 1940).

The Liberal Government sworn in Oct. 23, 1935, was constituted as follows, in order of precedence, on Jan. 4, 1943: William Lyon Mackenzie King, Prime Minister, President of the Privy Council, Secretary of State for External Affairs; Thomas Alexander Crerar, Minister of Mines and Resources; James H. King, Minister without Portfolio; James Layton Ralston, National Defense; Ian Alistair MacKenzie, Pensions and National Health; Charles Gavran Power, Associate Minister of National Defense and Minister of National Defense for Air; James Lorimer Illesley, Finance; Joseph Enoil Michaud, Transport; Clarence Decatur Howe, Munitions and Supply; James Garfield Gardiner, Agriculture; Norman Alexander McLarty, Secretary of State; James Angus MacKinnon, Trade and Commerce; William Pate Mulock, Postmaster General; Colin William George Gibson, National Revenue; Angus Lewis Macdonald, Minister of National Defense for Naval Services; Louis Stephen St. Laurent, Minister of Justice and Attorney General; Humphrey Mitchell, Labor; Alphonse Fournier, Public Works; Ernest Bertrand, Fisheries; Leo R. LaFleche, National War Services. For Canada's war declarations, see table under WORLD WAR.

HISTORY

The Fighting Fronts. Throughout the year Canada, which had forces stationed in Britain almost from the beginning of the war, anticipated more extensive action on the fighting fronts. The participation of Canadian troops in the successful Sicilian campaign in July and August was therefore a source of peculiar gratification at home. Canadian troops cooperated in the reoccupation of Kiska which was announced late in August, and Canadian

forces were responsible for the taking of Ortona, on the road to Rome, in December. Early in the year it was reported by Air Marshal Harold Edwards, commander-in-chief of the Royal Canadian Air Force, that 25 per cent of the flying strength of the Royal Air Force was then composed of Canadians. In December it was announced that Lt.-Gen. Kenneth Stuart would succeed Lt.-Gen. A. G. L. McNaughton, who retired as Canadian army commander because of ill health.

Losses inflicted on Canadian shipping by German submarines decreased in comparison with those of the preceding year, although in the early weeks of 1943 they were still heavy. By the middle of March Navy Minister Angus Macdonald was able to report to the House of Commons that only 3 out of every 1,000 tons of shipping moving through the Gulf of St. Lawrence had been sunk. Canada's losses in the Sicilian victory were 385 killed, 1,200 wounded, and 310 missing, figures which were considered moderate in view of the number of Canadians engaged in that battle. In December it was announced that the casualties in the R.C.A.F. since the start of the war were 10,025, of whom the known dead were 3,654; presumed dead, 3,249; missing, 2,068; prisoners of war, 1,039; interned in neutral countries, 15.

The Armed Services. It was announced in September that Canada's home defense army was to be substantially reduced by the disbanding of two divisions and the substitution of smaller formations. In a subsequent statement clarifying the announcement the Department of National Defense stated that the territorial defense establishment of Canada was to be revised in the light of the overall military situation, but that there was to be no modification of the existing law obliging all men of military age and fitness to serve, and no reduction in the call for volunteers for overseas service, which was set at 100,000 a year. It was estimated that 20,000 men of the lowest medical categories would be made available for essential civilian service.

The issue of conscription for overseas service remained complicated by opposition from the province of Quebec (see 1943 YEAR BOOK, pp. 111, 112). Although the bill permitting conscription for overseas service became law in July, 1942, its provisions were not invoked, in accordance with the assurance given by Prime Minister W. L. Mackenzie King at that time that conscription would be resorted to only in case of imperative necessity and with the approval of the Cabinet. Nevertheless the issue remained alive in the province of Quebec. On March 18 the Quebec legislature adopted a motion urging the Federal Government not to impose conscription for overseas service. On February 25, however, only 9 of the 65 Quebec Liberals in the Dominion House of Commons followed their leader, P. J. A. Cardin, when he offered a motion asking for the suspension of the existing draft laws until the manpower situation had been examined by a parliamentary committee.

Labor Minister Humphrey Mitchell announced on August 14 the call to military training of married men aged 27 to 30 and of all men who reached the age of 18 in 1943. The relevant order-in-council covered all men not heretofore designated or already under arms, and whatever their marital status, who were born in any of the years 1913 to 1916 inclusive. Similarly, the call applied to men born in 1925, except that none of these would be served with orders-medical until he reached the age of 18 years and 6 months. In March it was announced that aliens of military age, including Americans resident in Canada, were to be called

up for military service. Such draftees were to have the option of serving in their own national forces or in the Canadian forces, and the Labor Minister recommended that they consult their national consuls before deciding. Enemy aliens were not included in the order.

The employment of drafted men in the lower medical categories on railway development and maintenance was authorized by the Canadian Government in November. The men thus called would remain under military law and discipline, and would be entitled to a military pension in case of sickness or injury suffered in the course of their work. The men would remain on army pay and allowances, but at the end of their service they would be entitled to any excess amount due them if the amount of charges due for their work exceeded what they had received. The Ministers of Labor and Defense were authorized to make the financial arrangements relating to the charges made for their services.

The decline in the effectiveness of Nazi fighter planes had the result, by the end of the year, of the concentration by many Canadian air training centers on training bomber navigators, bombardiers, wireless operators, gunners, and pilots. Air Minister C. G. Power, in commenting in December on this change, said that while a steady supply of fighter pilots would continue to be trained, even greater attention would be given to developing bomber crews. This would involve a considerable reshuffling of training schools. A substantial number of British instructors and ground crews, released from their work in Canada, were scheduled to return to Britain to be used in the increased operational work there. The supply of ground crew men available in Canada had become so large that men who applied for enlistment might find themselves in the army instead. The original Empire air training plan called for a ground crew personnel of 35,000. This number was doubled and then again increased, but henceforth preference was to be given to men found unfit for service overseas. In addition to approximately 250,000 men in the air force and in the navy, Canada had at this time an army force of about 440,000, about two-fifths of whom were overseas. Also see NAVAL PROGRESS.

War Production. The year was one of unprecedented economic activity and the productive capacity of the Dominion was double that of the prewar period. In spite of some late indications of tapering off, after Canada had attained in the middle of the year what was believed to be its maximum output, the official index of business for the first 10 months of 1943 was 17 per cent higher than that for the corresponding period in 1942. By the middle of the year Canada was launching each week six or more escort, cargo, or patrol vessels, according to a report given in the House of Commons by Munitions Minister C. D. Howe. In addition, the Dominion was producing weekly 4,000 motor vehicles, 450 fighting vehicles, 940 heavy guns or mountings, 13,000 smaller weapons, 525,000 rounds of heavy ammunition, 25,000,000 rounds of small arms ammunition, and 10,000 tons of chemicals and explosives.

It was estimated that at the close of 1943 Canada had contributed to the war strength of the United Nations 750 ships, 10,000 aircraft, 35,000 armored fighting vehicles, 600,000 other military vehicles, 100,000 guns, barrels and mountings, and 100,000 small arms. Canadian manufacture also included 1,000,000 tons of explosives, 60,000,000 rounds of heavy ammunition, 3,000,000 rounds of small arms ammunition, and instruments and

communications material valued at nearly \$300,000,000. About 30 per cent of Canadian production went to Canadian forces at home and abroad, about 50 per cent to Britain and Russia, and the remaining 20 per cent to the United States, China, and the Pacific theater.

Manpower Mobilization. The rapid pace of production necessarily involved a shortage of manpower. The steps necessary to install a modified form of compulsory national service were taken in 1942 (see 1943 YEAR BOOK, p. 113) and in 1943 it was necessary to make use of these powers in order to find labor for essential industry. In May, in two successive orders, the Minister of Labor announced lists of occupations, the workers in which were made liable to transfer to occupations directly connected with the war program. The first of these orders, issued on May 4, applied to men in age and marital classes designated as callable for military training under National Selective Service Mobilization Regulations who were in certain specified nonessential employments. These men were required to report to an employment or selective service office no later than May 19 and the responsibility was put on employers as well as employees. A further order of May 15 was made applicable to single men and childless widowers aged 19 to 40 and to married men from 19 to 25 years of age, engaged in further specified types of employment. In this instance the men were required to report not later than June 15.

In June it became necessary to broaden the age brackets for compulsory transfers. Minister of Labor Humphrey Mitchell told the House of Commons that in view of the fuel wood shortage and the pressing needs in the fishing and fish-packing industries, youths from 16 years up to military age and men up to 65 would become subject to compulsory transfer orders. By the middle of November compulsory transfer orders had affected the occupations of 14,810 men who had been moved from less essential to more essential work, and 20,000 other cases were under consideration.

On June 23, when the broadening of the age brackets for compulsory transfer was announced in the House of Commons by Labor Minister Humphrey Mitchell, the Labor Minister presented figures for the working population of Canada. At that time, out of 8,720,000 persons in Canada aged 14 or over, 5,100,000 were in the armed services or employed at paid work. As the figure for those at work did not include housewives, it is evident that the number of persons in Canada who were not in useful occupations was very small. Seventy per cent of the males over 14 were in war plants, agriculture, railroading, or other essential civilian occupations. During the year the number of women at work increased rapidly, especially in the western part of the country. By October 1 there were 510,715 women workers in Canadian industry and allied occupations, approximately 70,000 more than on the corresponding date in 1942, forming 26.2 per cent of the 1,950,131 persons employed in industry at that time.

On May 18 new selective service regulations aimed at eliminating former coal miners from other employment and putting them back into the production of coal were announced in the House of Commons by Labor Minister Humphrey Mitchell. The order-in-council providing for these transfers, which came one day after the Government's declaration of a state of national emergency in coal production, provided that any employee in any industry who had coal mining experience must report that fact to his employer by May 25, and

that the employers must report details on employees who were former coal miners to a selective service officer by June 1. Selective service officers were authorized to require the former miners to report for interviews and to accept work at the coal mines.

Industrial Disputes. Canada was seriously plagued in 1943 by strikes in steel and other essential or important industries. Early in August approximately 20,000 workers in Montreal's three largest aircraft plants went on strike to enforce demands for a retroactive cost-of-living bonus. On August 16 the striking aircraft workers returned to work under the same conditions as when they left. A strike of Montreal police, fire, and public works department employees began on December 14. The strike ended after 11 hours, at the request of the provincial Government of Quebec that the Quebec Municipal Commission accept the majority report of an arbitration board involving recognition of the Canadian Congress of Labor as the sole bargaining agent for the striking groups. On December 21 municipal white-collar workers of the city of Montreal began a strike for wage increases. Union officials estimated the prevailing average salaries of white-collar workers at \$1,020 annually for single persons and \$1,200 for married persons.

Price and Wage Control. The Dominion Government attempted to maintain throughout the year the control of prices and wages set up in 1941 (see 1942 YEAR BOOK, p. 100) and successful in 1942, but by autumn it was apparent that the wage-control aspect of the system was not fully effective. Prices, on the other hand, were well under control. In the two years following the introduction of the system there was a price increase of only about 4 per cent. Between Nov. 1 and Dec. 1, 1943, the official cost-of-living index declined fractionally. Wages, which were intended to be held with prices by fitting a cost-of-living wage bonus to any changes in the official index, in practice were in many instances increased under decisions of the War Labor Boards. In a radio address on December 4 Prime Minister W. L. Mackenzie King told his countrymen that in the past two years the War Labor Boards had dealt with 40,000 applications for wage adjustments affecting 2,500,000 workers, and had granted increases amounting in all to more than \$150,000,000. The Government was therefore to issue a revised wage control order and at the same time a code of labor relations for war industries.

Under the new order, "Wartime Wages Control Order, 1943," which was made public on December 9, cost-of-living wage bonuses were scheduled to be merged with wage rates as of Feb. 15, 1944, and no further increases in wages would be made except for the purpose of removing gross inequalities and injustices. If the cost of living should rise more than 3 per cent and remain at that level for two consecutive months the Government would, however, review the whole program of price and wage control and take appropriate action. Government, Dominion, provincial, and municipal employees were excepted from the order and would continue to receive the cost-of-living bonus. The National War Labor Board, under the chairmanship of Mr. Justice C. P. McTague, which had recently conducted an inquiry into the whole field of industrial relations, would now consist of six members instead of three and would exercise control over regional boards and review their findings.

In the meantime further increases in prices and wages were made in the eastern coal district. On December 6 the National War Labor Board, with expressed reluctance, granted an increase of \$1 a

day in the wages of eastern coal miners, remarking that this decision, which applied to the miners of Nova Scotia who brought forward their case in the way lawfully provided, was forced by the recent success of the western coal miners who won wage increases by striking. On December 15 Finance Minister J. L. Ilsley announced a government decision to increase the price of coal produced in the Nova Scotia coal mines, in line with a recent increase in coal prices for Alberta and British Columbia.

Financial Policy. In the Federal budget for 1943-44 presented to Parliament by Finance Minister Ilsley on March 2 (see *Finance* above) there was no major change in the basic structure of the income tax except for the lowering of rates slightly above the exemption levels. In this budget the transformation to a pay-as-you-earn system was completed and it was expected that 95 per cent of income tax, instead of 90 per cent as formerly, would now be collected at the source. There were no changes in the sales tax or the succession duties and only minor alterations in the excess profits tax. The customs tariff was slightly reduced except for liquor, but several excises were raised. In the same period financial provision was made for a second gift of \$1,000,000,000 in war supplies (see 1943 YEAR BOOK, p. 114) to Britain and other members of the United Nations.

In introducing on May 6 the bill providing for the expenditure Finance Minister Ilsley said that the Canadian Government wished to share its war supplies with others, that it did not wish a shortage of Canadian dollars to prevent any allies from obtaining Canadian war materials, and that it wished to avoid the piling up of huge war debts by selling goods for payment after the war or by creating indefinite and uncertain postwar obligations.

Canada floated two large war loans in the course of the year. The Fourth Victory Loan, the largest public bond issue in the history up to that time, offered to the public on April 26, brought in subscriptions of \$1,303,000,000 representing 2,669,111 subscribers. The Fifth Victory Loan, opened on October 18, was set at \$1,200,000,000, but it brought in \$1,383,000,000 from more than 3,000,000 subscribers. Throughout the year revenues were buoyant but expenditures grew even more rapidly.

Political Developments. The Canadian Parliament was prorogued on January 27, after a review of events since the session opened on Jan. 22, 1942. One day later a new session, the fourth of the 19th Parliament, was declared open. This session ended on July 24 with an adjournment to Jan. 26, 1944. Except for a two-week recess at Easter the body had been sitting continuously for six months. The House of Commons occupied itself largely with financial matters, production, the cost of living, labor and manpower policy, and postwar plans. Early in March two committees were appointed to make recommendations on the country's postwar problems: a Committee on Reconstruction and Re-establishment and a Committee on Social Security. The latter committee shortly received a report on health insurance by Minister of Pensions Ian MacKenzie and a general social security report, resembling the British Beveridge Report, by Dr. Leonard C. Marsh.

The Liberal Party continued its efforts to maintain its popularity and prestige but as the dominant party it suffered a number of setbacks. The Conservative Party, reorganized under the title of Progressive Conservative (see 1943 YEAR BOOK, p. 114), the Cooperative Commonwealth Federation

under the leadership of M. J. Coldwell and Quebec's Bloc Populaire continued to show success in getting voters to go to the polls. In four Federal by-elections held on August 9 the Liberals lost and their representation on the House of Commons was thereby reduced from 174 to 170. In Saskatchewan two Cooperative Commonwealth Federation candidates were successful; in Stanstead, Quebec, the election was won by a Bloc Populaire candidate, and in Montreal-Cartier the winner was a Communist running as a Labor-Progressive. Progressive-Conservatives now held 39 seats, Cooperative Commonwealth Federationists 11, Social Crediters 10, and the Bloc Populaire 4.

Coming after the very considerable defeat of the Liberals in the Ontario provincial elections of August 4, these results suggested that a general election might not be far away. The preceding general election was held in May, 1940. On September 27, however, Prime Minister Mackenzie King gave the National Liberal Federation meeting in Ottawa an assurance that no election would be held in 1944 unless one of the following conditions arose: a decided unwillingness of the people to support the Government's policies, a distortion of the Government's policies by an opposition group, a split in the Government or among its supporters, or an unforeseen event. Progressive Conservative leader John Bracken objected to Mr. Mackenzie King's statement on the ground that the conditions gave the Prime Minister an excuse for calling an election at any time and then putting the responsibility on others.

The Cooperative Commonwealth Federation showed markedly increased vigor in 1943. Although the party's representation in the House of Commons remained small, its national council, meeting in Regina, Sask., on December 30, prophesied that it would play a large part in a dramatic political conflict in Canada in 1944. In a statement issued at that time the council alleged that money was being poured out by the monopolists to popularize a return to the system of free enterprise, "the system with which Canada experimented before the war."

The autonomist movement in the province of Quebec retained its existence but showed little new strength. On March 2 the provincial Legislative Assembly defeated by a vote of 38 to 12 a motion demanding that the government of the province adopt at once all appropriate measures in order that the province might recover and retain its complete autonomy. The death in Vancouver on May 23 of Social Credit Premier William C. Aberhart of the province of Alberta, who had been in office since his party's victory in the provincial elections of 1935, called attention to the failure of Mr. Aberhart's government to implement social credit and to the possibilities of a political upset in Alberta. In a provincial by-election on December 16, however, a Social Credit candidate was elected to the legislature, giving Social Credit 35 seats in the legislative assembly of 57.

Relations with United States. In recognition of the growing importance of their relations, Canada and the United States agreed on November 11 to elevate their respective legations in Washington and Ottawa to the rank of embassy. Both military and economic collaboration were greatly extended in the course of the year. On May 21 it was announced that the U.S. Army had established a base at Porpoise Harbor, near Prince Rupert Harbor on the British Columbia coast. The joint economic committees of Canada and the United States

announced on January 24 that their wartime collaboration would extend to the peace-time development of 1,000,000 square miles of Alaska, northern British Columbia and Yukon Territory. On February 1 notes setting forth the general principles covering the postwar disposition of defense projects that the U.S. Government had built or might build in Canada were put on record in the House of Commons. The notes incorporated a recommendation of the Permanent Joint Board on Defense, adopted on January 13, which suggested that all immovable defense installations should be, unless otherwise agreed by the two governments, relinquished in the right of Canada or offered for sale to the Government of Canada or in the open market subject to the approval of both governments.

Beginning at the end of January, publicity was given to the great Shipshaw power and aluminum project in Quebec, financed by the Aluminum Company of Canada out of contracts for sales of aluminum to the United States. The financing by the United States continued to receive critical attention especially when, at the end of the year, American authorities closed certain American aluminum plants while the Canadian contract remained operative.

The project of widest public interest, known as "Canol," was the American development at the request of the U.S. Army of oil wells and pipelines in the region of Fort Norman, Northwest Territories, and Whitehorse, Yukon Territory. This project, which was connected with the Alaska Military Highway and with "Catel," a telegraph and wireless system covering all the projects, was initiated in June, 1942, when danger of further Japanese aggression seemed great, but it was not widely discussed by the public until November, 1943, when it was criticized by the American Senate's "Truman Committee." The project was not Canadian, but sections of Canadian opinion were put on guard against a possible rewriting of agreements. The position of Canada in respect to the development was set forth in notes exchanged between the two governments in August, 1942, which provided that such undertakings be subject to valuation by a joint international board, with a first option given to the Canadian Government to purchase at an agreed valuation.

Other International Relations. Canada's mutual aid gift of \$1,000,000,000 in war supplies to Britain and other nations reinforced the already cooperative relationship with Britain. Canada was fully cognizant of the significance of the choice of Quebec City for the holding of the Quebec Conference (see UNITED NATIONS) in August and of the presence of Prime Minister Winston Churchill. At the end of the Quebec Conference the Canadian Government issued a statement welcoming the establishment of the French Committee of National Liberation and recognizing it as administering the French overseas territories which acknowledged its authority. Prime Minister Mackenzie King told the House of Commons on May 11 that henceforward Canada would send war supplies directly to Russia, instead of through the United States or Britain as previously. In August the Turkish Ministry of Foreign Affairs decided to create an embassy in Canada, and in December Canada raised the rank of its legations in the Soviet Union, China, and Brazil to that of embassies.

See ALASKA, GREAT BRITAIN, and JAPAN under *History*; BANKS and BANKING; CHEMISTRY under *Foreign*; DAMS; FRENCH LITERATURE; IMMIGRATION; JOINT ECONOMIC COMMITTEES; JOINT WAR

PRODUCTION COMMITTEE; LABOR CONDITIONS; MUSIC; SOCIALISM; WORLD WAR.

ALZADA COMSTOCK.

CANADA, The United Church of. The designation applied to the single body formed by the union in 1925 of the Congregational, Methodist, and Presbyterian churches in Canada; the Methodist churches of Newfoundland and Bermuda are also included. In the year of 1942 there were in Canada, Newfoundland, and Bermuda 7,042 preaching places (including home missions) in 2,771 pastoral charges, 721,184 communicant members, and 1,713,186 persons under pastoral care. A total amount of \$12,250,863 was raised for all purposes. At the Tenth General Council held in Belleville, Ont., in September, 1942, the Rev. J. R. P. Slater, M.A., D.D., was chosen moderator for the ensuing biennium. Rev. Gordon A. Sisco, M.A., D.D., is general secretary. Headquarters: 421 Wesley Building, Toronto, Ont.

CANADIAN COOPERATIVE FEDERATION. See SOCIALISM.

CANALS. See AQUEDUCTS; PANAMA CANAL ZONE; SUEZ CANAL; WATERWAYS.

CANARY ISLANDS. An archipelago off the coast of northwest Africa. Administratively they form two provinces of Spain, and are named after their respective capitals: (1) Las Palmas (comprising the islands of Gran Canaria, Lanzarote, Fuerteventura, and the islets of Alegranza, Roque del Este, Roque del Oeste, Graciosa, Montaña Clara, and Lobos), area, 1,279 square miles; population (Jan. 1, 1941), 322,332; capital, Las Palmas (119,595 inhabitants) on Gran Canaria. (2) Santa Cruz de Tenerife (comprising the islands of Tenerife, Palma, Gomera, and Hierro), area, 1,528 square miles; population (Jan. 1, 1941), 365,605; capital, Santa Cruz de Tenerife (72,358 inhabitants). Las Palmas is normally an important shipping and tourist center. Coffee-growing is the chief industry. Corn, millet, sugar cane, manioc, fruits, vegetables, tobacco, cotton, indigo, and castor oil are produced. Exports of fish and fish products totaled 28,646 metric tons in 1942.

CANNING. See FOOD INDUSTRY; TIN.

CANOL. See ALASKA, CANADA, and YUKON under *History*.

CANTEEN CORPS. See RED CROSS.

CANTON ISLAND. An atoll of the Phoenix group in the central Pacific which with Enderbury Island of the same group is under the joint control of Great Britain and the United States (Anglo-U.S.A. Pact of Aug. 10, 1938 and Notes of Apr. 6, 1939). Canton is 29 miles in circumference and has a land mass of from 50 to 600 yards wide which encloses a lagoon 9 miles in diameter. Enderbury is 2.5 miles long and 1 mile wide. Canton was a port of call on Pan American Airways' transpacific air service from Honolulu to Auckland, New Zealand, which commenced on July 12, 1940. Besides a complete seaplane base, the facilities installed at Canton after it was occupied in 1938 included a 24-room hotel and other conveniences for passengers. A landplane runway was constructed in 1941. These facilities were shelled by Japanese warships in December, 1941, but damage was reported to be slight. Early in 1942 United States armed forces were stationed on the island, which became an important link in the air transport route to the battle fronts of the southwestern Pacific and a base for air patrol operations.

CAP. Civil Air Patrol. See **CIVILIAN DEFENSE, OFFICE OF.**

CAPE OF GOOD HOPE. See **SOUTH AFRICA, UNION OF** under *Area and Population.*

CAPE VERDE ISLANDS. A dependency of Portugal, 320 miles west of Cape Verde, French West Africa. The islands comprise the Barlavento (windward) group (São Vicente, Santo Antão, São Nicolau, Santa Luzia, Sal, Boavista, Branco, and Raso) and the Sotavento (leeward) group (Santiago, Maio, Fogo, Brava, Rei, and Rombo). Total area, 1,557 square miles; population (Jan. 1, 1941), 181,286 including 5,580 Europeans. Capital, Praia (on Santiago), 6,188 inhabitants. Porte Grande, in São Vicente, is an important fueling station on shipping lines from Europe to South America and Africa. Shipping (1940): 918 vessels of 3,170,609 tons (net) entered. The chief products are sisal, castor oil, mustard, coffee, oranges, maize, tobacco, salt, brandy, and hides. The overseas trade in 1941 was (special commerce only): imports, 46,386,000 escudos; exports, 48,551,000 escudos (escudo was worth \$0.0412). Budget estimates for 1941 balanced at 19,020,554 escudos. Governor, Commdr. Joao Figueiredo.

CAPITAL MOVEMENTS. See **FINANCIAL REVIEW.**

CARBON MONOXIDE POISONING. See **TUNNELS.**

CARBON STEEL. See **IRON AND STEEL.**

CARIBBEAN COMMISSION, Anglo-American. A Commission created Mar. 9, 1942, by the British and U.S. Governments to strengthen social and economic cooperation between the United States, the United Kingdom, and territories under the British and United States flags in the Caribbean area, and to avoid unnecessary duplication of research. The six-member Commission serves in an advisory capacity to the two governments and is concerned primarily with labor, agriculture, housing, health, education, social welfare, finance, economics, and related subjects. The U.S. Section became an integral unit of the Department of State (q.v.) on Dec. 14, 1942. See **BRITISH WEST INDIES** and **JAMAICA** under *History.*

CARIBBEAN DEFENSE COMMAND, U.S. See **NICARAGUA** under *History.*

CARNEGIE ENDOWMENTS. Carnegie Corporation of New York. Established by Andrew Carnegie in 1911, this corporation was formed for the advancement and diffusion of knowledge and understanding among the people of the United States and the British Dominions and Colonies. Its total endowment is approximately \$135,000,000, of which \$10,000,000 is applicable in the British Dominions and Colonies.

During the year ended Sept. 30, 1943, the Corporation appropriated \$2,562,900 for library interests, adult education, fine arts, research, study, and publication, and various purposes of colleges and universities. Some \$490,000 was devoted to activities connected directly with the war effort, thus making a total of more than \$1,650,000 granted for such purposes during 1940-43.

The trustees of the Corporation as of Oct. 15, 1943, were: Thomas S. Arbuthnot, W. Randolph Burgess, Vannevar Bush, Nicholas Murray Butler, Henry James, Walter A. Jessup, Nicholas Kelley, Russell Leffingwell, Margaret Carnegie Miller, Frederick Osborn, Arthur W. Page, and Elihu Root, Jr. Officers of administration were: Walter A. Jessup, president; Robert M. Lester, secretary; and

C. Herbert Lee, treasurer. Office: 522 Fifth Avenue, New York City.

Carnegie Endowment for International Peace. Founded by Andrew Carnegie in 1910, the endowment consists of a trust fund of \$10,000,000, the revenue of which is to be administered to hasten the abolition of international war. The work is carried on in three Divisions: (1) Division of Intercourse and Education; (2) Division of International Law; (3) Division of Economics and History.

A special library containing 70,000 volumes on all aspects of public international relations is maintained in Washington. During the fiscal year ended June 30, 1943, the Endowment's income amounted to \$497,875, which included grants of \$75,000 from the Carnegie Corporation of New York. During this period, the Endowment expended \$468,215. The officers are: President, Nicholas Murray Butler; Vice-President, John W. Davis; Secretary, George A. Finch; Treasurer, Roland S. Morris. Administrative offices are at 700 Jackson Place, Washington, D.C. Divisional offices are at 405 W. 117 St., New York City.

Carnegie Foundation for the Advancement of Teaching, The. A foundation established in 1905 by Andrew Carnegie, who gave an endowment of \$10,000,000 for paying retiring allowances and widows pensions in the United States, Canada, and Newfoundland and for various other purposes in the field of higher education. Incorporated by Act of Congress in 1906, the Foundation received a further gift of \$5,000,000 from Mr. Carnegie and appropriations totaling \$13,250,000 for endowment and reserves from Carnegie Corporation of New York. On June 30, 1943, its resources amounted to \$18,402,445. In 1942-43, it disbursed \$1,931,238 for allowances and pensions. It awards no scholarships or aids of any kind. The Foundation's Annual Reports and Bulletins deal with many phases of higher education. In 1943 its principal studies concerned the educational appraisal of individuals through new-type tests and testing, particularly at the graduate level. Dr. Walter A. Jessup is president, and Howard J. Savage, secretary and treasurer, with offices at 522 Fifth Avenue, New York City.

Carnegie Hero Fund. A Fund established in 1904 by Andrew Carnegie to help those who have risked their lives to an extraordinary degree to save human life or to aid dependents of rescuers who have lost their lives in the performance of their acts. The original endowment was \$5,000,000; the amount expended to Sept. 30, 1943, was \$6,419,473. Dr. Thomas S. Arbuthnot is President and Mr. C. B. Ebersol is Assistant Secretary and Manager of the Fund, the address of which is 2307 Oliver Building, Pittsburgh, Pa.

Carnegie Institute, located in Schenley Park, Pittsburgh, Pa., founded and endowed by Andrew Carnegie in 1896, comprises the Department of Fine Arts, the Carnegie Museum, and the Carnegie Music Hall. For activities, see **YEAR BOOK** for 1940. Thirty-six prominent citizens of Pittsburgh constitute the Board of Trustees. The officers are as follows: Samuel Harden Church, President; William Frew, Vice-President; Augustus K. Oliver, Secretary; Richard K. Mellon, Treasurer.

Carnegie Institution of Washington. An organization founded in 1902 by Andrew Carnegie "to encourage in the broadest and most liberal manner investigation, research, and discovery, and the application of knowledge to the improvement of mankind." Income on investments for the year 1943 amounted approximately to \$1,150,000.

Organization of the normal research program of the Institution remains much as described in YEAR BOOK for 1941. Due to present war emergency, however, the entire resources of the Institution including laboratory facilities and personnel have been made available to the U.S. Government, and most of the Institution's long-time projects have been temporarily deferred in lieu of war research contracts with the Government. The President of the Institution is the Director of the Government's Office of Scientific Research and Development.

W. Cameron Forbes is Chairman of the Board of Trustees of the Institution, and Vannevar Bush is President. Other Trustees are: Thomas Barbour, James F. Bell, Robert Woods Bliss, Lindsay Bradford, Frederic A. Delano, Homer L. Ferguson, Walter S. Gifford, Herbert Hoover, Walter A. Jessup, Frank B. Jewett, Alfred L. Loomis, Roswell Miller, Henry S. Morgan, Seeley G. Mudd, John J. Pershing, Henning W. Prentiss, Jr., Elihu Root, Jr., Henry R. Shepley, Richard P. Strong, Charles P. Taft, James W. Wadsworth, Frederic C. Walcott, and Lewis H. Weed. Headquarters: Sixteenth and P Streets, N.W., Washington, D.C.

See LIBRARY PROGRESS.

CAROLINE ISLANDS. See JAPANESE PACIFIC ISLANDS.

CAR-SHARING. See CIVILIAN DEFENSE, OFFICE OF.

CASABLANCA CONFERENCE. See ALGERIA, FRANCE, GREAT BRITAIN, and MOROCCO, under *History*; UNITED NATIONS; UNITED STATES.

CASTELROSSO ISLAND. See ITALIAN AEGEAN ISLANDS.

CASUALTIES. See NEWSPAPERS; WORLD WAR; AUSTRALIA, CANADA, CHINA, GERMANY, ITALY, and other belligerent countries, under *History*.

CATEL. See ALASKA, CANADA, and YUKON under *History*.

CATHOLIC CHURCH IN THE UNITED STATES. The *Official Catholic Directory* for 1943 lists a total Catholic population for the United States, Alaska, and Hawaiian Islands of 22,945,247, an increase of 389,005 over 1942. One new diocese, Youngstown, Ohio, was established last year, bringing the total number of dioceses to 96; archdioceses number 20. At the annual meeting of the Archbishops and Bishops in November at the Catholic University of America, reports by the heads of the various departments of the National Catholic Welfare Conference summarized the activities of the Church during the year past.

The Most Rev. Edward Mooney, Archbishop of Detroit, Chairman of the Administrative Board of the National Catholic Welfare Conference, reported that "it is to be expected that Government program and policies will have an important effect on the social and educational agencies of the Church." Problems arising out of new tax proposals, out of the application of Selective Service, and out of decisions of War Manpower boards regarding workers in educational, religious, and charitable institutions, were some of those referred to by Archbishop Mooney. He pointed out the importance of the work of War Relief Services, N.C.W.C., during the past year; that "the contributions made by our Catholic people to the Bishops' War Emergency and Relief work have received the commendation and appreciation of the Holy Father"; that the plans were successfully put into effect for the publication in this country of *Acta Apostolicae Sedis*, official publication of the Holy See.

"The situation of the American family, certainly very grave before the war, has grown worse since its outbreak," Archbishop Mooney told the meet-

ing. He reported on the work of the N.C.W.C. Family Life Bureau, supported by the various national committees of the National Council of Catholic Women, to give local and national publicity to Catholic teachings on the family. The Administrative Board has presented to Government authorities "its grave concern on reported procedures in service camps and stations for prevention of venereal disease," and assurances have been given that the "consciences of our men will be respected."

The Church in the United States shared the bitter grief of the Catholic world that the City and Diocese of the Holy Father had finally to endure the fury of aerial warfare. Repeated expressions of grave concern and regret will aid in saving the Eternal City from the disaster threatening it.

Throughout the year the Department of Education has been occupied mainly with problems that arise directly or indirectly out of the war and its impact on the Catholic schools, the Most Rev. John T. McNicholas, O.P., Archbishop of Cincinnati and Episcopal Chairman of that Department, reported. The department has been closely following the activities of the various groups that are interesting themselves in the problems that will face education in the postwar world. "The condition of the time," the report continued, "was reflected in an increased demand for boarding schools for young children, nursery schools, and vocational schools. The employment of mothers and disrupted home life are causing more parents to send young children to boarding schools and increasing the need for the care and instruction of pre-school children." Other chapters in the report are devoted to the activities of the Inter-American Collaboration Section, the Teachers' Registration Section, Library Service, and Special Publications.

During the past year, the N.C.W.C. Press Department so strengthened its coverage of Vatican news as to become the only source of complete information on Vatican wartime thought and activity, the Most Rev. John Mark Gannon, Bishop of Erie and Episcopal Chairman of the Department, reported. Through Vatican sources, also, much material was obtained concerning the occupied countries of Europe. This news of vital interest was transmitted by means of the Department's Spanish-language service, *Noticias Catholicas*, to the countries of Latin America. The News Service registered an increase of 21 subscribers during the year, bringing the total to 204 in 32 lands.

The Most Rev. John F. Noll, Bishop of Fort Wayne and Episcopal Chairman of the Department of Lay Organizations, reported that the headquarters of the National Council of Catholic Women continues to serve as a training center for women leaders in Catholic Action, as a clearing-house and publicity medium for programs of women's organizations, as a source of representation of Catholic women's interests in secular and governmental groups, as a liaison between Catholic women in the United States and the International Union of Catholic Women's Leagues, and as sponsor of the National Catholic School of Social Service. An important service provided to affiliated organizations is a monthly release on proposed and existing legislation.

The National Council of Catholic Men was authorized to cooperate in the work of the National Organization for Decent Literature, by centralizing in its office reports from reviewers, compiling therefrom and periodically revising the list of publications not approved because of failure to conform to the N.O.D.L. Code, conducting negotia-

tions with publishers concerning inclusion of their publications on the list or removal therefrom, and reporting its conclusions and recommendations to the Chairman of the Episcopal Committee on Obscene Literature. The list of Magazines Disapproved by the N.O.D.L. was revised, the number of such magazines (up to June 30, 1943) being 54.

The Narberth Movement, a plan designed for the diffusion of information about Catholic faith and practice through the medium of pamphlets and press releases, was formally taken over by the N.C.C.M. at the end of 1942; during the year 52 "Narberth" articles were prepared for the secular press, as well as various other pieces of promotional literature. The year ending March 2, 1943, marked the close of the Catholic Hour's thirteenth year. During the year 89 stations have carried the hour.

The Department of Social Action sent to 700 priests a monthly four-page letter and other material, and prepared a four-year course for seminarians' study clubs in the field of industrial relations, the Most Rev. Karl J. Alter, Bishop of Toledo and Episcopal Chairman of the Department, stated in his annual report. In the field of industrial relations, four regional two-day industrial conferences were held, and members of the Department served on various governmental committees. In the rural life field, the Department aided in increasing the educational and propaganda activities of the National Catholic Rural Life Conference, which now has 75 Diocesan Directors and two Regional Directors. In the civic field, the Department was active in combating racial discrimination.

The Most Rev. Joseph F. Rummel, Archbishop of New Orleans, Episcopal Chairman of the Legal Department, noted that the condition of crisis occasioned by the war "in a great measure has disappeared." Problems which have arisen in the war-made fields of manpower, critical materials, transportation, taxation, and kindred divisions, occupied much of the attention of the Department members. In cooperation with the Catholic Hospital Association, the Department worked out a project whereby two hospital Sisters from each of the Latin-American republics will be brought to this country for a year of training and study. The Department, in the field of vocational rehabilitation, has contacted officials responsible for the administration of the Federal Vocational Rehabilitation Act in an effort to devise some way in which aid might be extended to those desiring to attend a denominational school.

The Most Rev. John A. Duffy, Bishop of Buffalo and Episcopal Chairman of the N.C.W.C. Youth Department, reported distribution of "grants-in-aid," administered by the Youth Department, from a fund of \$50,000 appropriated by the Bishops' War Emergency and Relief Fund to chaplains working with trainees on secular campuses. The appropriation assists chaplains in providing for extra Masses, Confessions, sick calls, religious articles, and literature. At the present time, 102 dioceses out of a total of 115 have Diocesan Youth Directors. Despite adverse circumstances, practically all of the organized dioceses conducted leadership training institutes for adult lay leaders during the year.

One of the outstanding achievements of the college and university section of the National Catholic Youth Council was the Catholic Collegiate Congress on "Victory in War and in Peace," sponsored jointly by the Newman Club Federation and the National Federation of Catholic College Students. The Congress brought together for

the first time 331 delegates from 60 Catholic and 118 delegates from 25 secular colleges and universities. Despite the war, the N.F.C.C.S. added 20 affiliates during the year, bringing the total to 85.

CATTLE. See LIVESTOCK; HIDES.

CAUDAL ANALGESIA, Continuous. See MEDICINE; PUBLIC HEALTH SERVICE.

CAYMAN ISLANDS. See under JAMAICA.

CCC. Abbreviation used for CIVILIAN CONSERVATION CORPS or COMMODITY CREDIT CORPORATION.

CEILING HEIGHTS. See METEOROLOGY under *Instruments*.

CEILING PRICES. See PRICE ADMINISTRATION, OFFICE OF; topics listed under PRICES.

CELEBES. See NETHERLANDS EAST INDIES under *Area and Population*.

CEMENT. See BUILDING MATERIALS.

CENSORSHIP, Office of. United States censorship was accepted more fully by officials and the public in the year 1943 as a necessary and valuable part of wartime economy. A comprehensive organization, built up in the first year after Pearl Harbor, sought to improve techniques, attain more efficient administration, and take increasing advantage of the affirmative benefits of the censoring process.

The Office of Censorship, created in December, 1941, retained major responsibility as a war agency with a staff of about 13,000, charged with censoring all mail, cables, and other communications entering or leaving the country. The Office also supervised the voluntary cooperation of the domestic press and radio in withholding secret military information.

Control of the international mails, the largest task physically, involved the problem of examination of about 1,000,000 pieces of mail available daily at Postal Censorship stations. Uniform regulations and schools of instruction for personnel were established. Several classes of mail, including letters to and from prisoners of war, required specialized treatment. Experts in trade, banking, and shipping communications were assembled and a special unit inspected philatelic mail to prevent transmission of illegal funds or of code messages.

Translators handled communications in some 200 languages and dialects and chemists in secret ink laboratories worked closely with intelligence agencies. Units cooperating with the Bureau of Customs scrutinized papers carried by international travelers and all photographic prints and films presented for export or import. The Armed Services, however, conducted the censorship of all mail to and from Army and Navy personnel overseas.

International communication by radio, cable, telegraph, radiotelephone, and land wire was handled by highly expert staffs, including experienced newspapermen, on duty 24 hours a day. Censorship delays were only a few minutes in many instances. One of the few public criticisms of censorship in 1943 was directed against this phase of operations by a number of British correspondents who declared deletions in dispatches from New York to London went beyond security requirements.

On Jan. 30, 1943, separate regulations for postal, cable, and radiotelephone communications were consolidated into the U.S. Censorship Regulations, which, in general, prohibit communication with enemy territory except by special license and state that revealing references to fortifications, ship and troop movements, and secret military plans or weapons will be stricken from communications crossing international boundaries. Copies were made available to the public.

Toward the end of 1942, some members of the U.S. Senate contended there was no legal warrant for censorship of communications between Continental United States and the Territories. Legislation to legalize this censorship was proposed but was dropped when the new Congress met in 1943. Censorship of these communications continued.

Voluntary censorship of press and broadcasting in the United States under supervision of the Office of Censorship continued in 1943 with the support of both industries. On Feb. 1, 1943, various eliminations and additions were made in the revised Code of Wartime Practices for the American Press and its companion Code of Wartime Practices for American Broadcasters. Late in 1943, an improved military situation and other factors prompted additional revision and relaxation permitting more complete weather reports for newspapers and the broadcasting of weather news for the first time in almost two years. Virtually all remaining restrictions on war production information, other than secret models, were eliminated. The way was opened for more publicity regarding the war contributions of merchant shipping.

Both the Press and Broadcasting Divisions of the Office of Censorship, operating with very small staffs and no branch offices, continued on the theory that every editor and broadcaster is his own censor under the Code. The percentage of violations was small.

The Office of Censorship continued through 1943 as an entirely independent agency responsible only to the President. Congress approved without debate \$27,800,000 for the agency for the fiscal year beginning July 1, 1943. See FREEDOM OF SPEECH.

BYRON PRICE.

CENSUS, Bureau of the. A branch of the U.S. Department of Commerce which serves as the fact-finding agency of the Government. It conducts the decennial census of population, the quinquennial census of agriculture, foreign trade and vital statistics reports, data on local governments, etc. Director in 1943: James C. Capt.

CENTRAL AMERICA. See BRITISH HONDURAS, COSTA RICA, EL SALVADOR, GUATEMALA, HONDURAS, NICARAGUA, and PANAMA.

CERAMICS. See WAR PRODUCTION BOARD under *Sub-titles*. For Tile, see BUILDING MATERIALS.

CEREBRO-SPINAL FEVER. See MEDICINE.

CERTIFICATE OF AVAILABILITY. See WMC.

CEYLON. A British self-governing colony, south of India. Area, 25,332 sq. mi. Population (1942 estimate), 6,000,000, of whom 64 per cent were Singalese. Vital statistics (1941): 219,864 births, 113,003 deaths. Buddhism is the religion of the greater part of the population. Chief cities: Colombo (capital) 310,000 inhabitants in 1936, Jaffna 46,000, Galle 38,500, Kandy 36,500.

Education. In 1940 there were 4,547 Singalese and Tamil schools with a total of 781,000 students; 410 English and bilingual schools and 100,000 students. Higher education was given in Colombo at the Royal College, the Government Training College, the Technical College, and the University of Ceylon. There were 90 industrial schools.

Production and Trade. Chief agricultural products: tea (112,000 tons exported in 1940), rubber (150,000 tons, est. output for 1943), coconut products (122,252 tons exported in 1940), rice, cinnamon, cacao, tobacco, and citronella. Livestock (1940): 1,745,777 cattle, 284,207 goats, 62,710 sheep, 39,211 swine, 1,658 horses. Minerals produced include

graphite (23,820 tons in 1940), ilmenite, and monazite. Small-gem quarries produce sapphires, rubies, moonstones, cat's-eyes, and other gems. Trade (1942): imports Rs274,000,000 (textiles, rice, coal and coke, augar, and manures were the main items); exports Rs507,000,000 (in 1942, one rupee equaled \$0.3012, 13.34 rupees equaled £1).

Communications. In 1940 there were 951 miles of railway open to traffic, 18,660 miles of roads, and 10,055 miles of telegraph wire. Shipping (1940): 6,445,409 tons cleared.

Finance. Budget estimates, exclusive of railway revenue and expenditure (financial year to Sept. 30, 1943): revenue £11,133,333; expenditure £12,266,666. Budget estimates for the year ending Sept. 30, 1944, provide for revenue of Rs215,000,000. In 1943 the Government launched a national loan of \$125,000,000 to be used to meet the 1943 defense appropriation, to repay a loan due in 1945-46, and to provide a fund for postwar industrial expansion. Ceylon in 1943 had an oversea credit of Rs167,000,000, as compared with an oversea debt of Rs106,000,000 in 1936.

Government. The Government is administered by a Governor, assisted by a State Council of 61 members (50 elected on a territorial basis, 8 nominated unofficial, and 3 officers of state). This State Council, which deals with administrative as well as legislative matters, is divided into 7 executive committees in charge of various subjects, and the chairmen of these committees are Ministers for the subject concerned. Governor, Sir Andrew Caldecott (appointed Jan. 19, 1937); Commander in Chief, Adm. Sir Geoffrey Layton (appointed Mar. 15, 1942, to control all naval, military, air, and civil authorities).

History. The promise of constitutional reform after the war, given to the Ministers of the Ceylon Government in 1941 by the British Government, was reiterated in more specific form by the British Colonial Secretary in the House of Commons May 26, 1943. His promise of "full responsible Government under the Crown in all matters of internal civil administration was in response to continued agitation for independence or self-government in Ceylon.

The Colonial Secretary said that once victory was won the British Government was prepared "to examine by suitable Commission or Conference such detailed proposals as the (Ceylon) Ministers may in the meantime have been able to formulate in the way of a complete constitutional scheme," subject to the following conditions: (1) Continued control by the British Government of defense, foreign relations, currency, rights and properties of non-resident British subjects, Commonwealth trade and shipping, and measures likely to involve oppression or unfairness to any racial or religious community; (2) approval of the Ceylon Ministers' proposals by three-fourths of all members of the Ceylon State Council, excluding the three appointed Officers of State and the presiding officer.

Active preparations were under way during 1943 to convert Ceylon into one of the two main bases (the other being India) for the reconquest of Burma and British Malaya. Large numbers of British East African native troops were reported in Ceylon in September, along with strong British air and naval forces.

CHAIN GANGS, Abolition of. See PRISONS.

CHEMICAL INDUSTRY. The year 1943 was one of continued sharp expansion for the chemical industry. Total dollar value of output of chemicals and allied products during 1943 was placed at \$7,500,000,-

000 by the Chemicals Division of the War Production Board. This represented an increase of 102 per cent over 1939 when total production reached \$3,700,000,000. Even allowing for a 15 per cent rise in chemical prices since 1939, the gain in chemical manufacture was very heavy. The percentage increase is even greater if the chemical manufacturing industry is considered by itself. Excluding allied products usually grouped with chemicals, the value of chemical manufacture grew from \$790,000,000 in 1939 to an estimated \$2,200,000,000 in 1943, a gain of 180 per cent in four years. The following table shows the chemical expansion since 1939, based on official index figures:

CHEMICAL SUPPLIES

	Total Industry Output	Industrial Chemical Output
(1935-39 = 100)		
1939.....	112	120
1940.....	130	153
1941.....	176	210
1942.....	278	286
1943.....	387	366

Behind the over-all totals of this expansion in production lies an interesting picture of expansion in specific chemical products. In the *organic chemicals industry*, according to War Production Board data, production of coal tar crudes and intermediates rose from \$73,000,000 in 1939 to an estimated \$290,000,000, an advance of 300 per cent. Coal tar finished products advanced from an output of \$106,000,000 in 1939 to \$200,000,000 in 1943, an expansion of 89 per cent. Non-coal tar synthetics production of \$173,000,000 in 1939 advanced to an estimated \$640,000,000 in 1943, a rise of 270 per cent. Non-coal tar other products moved up from \$25,000,000 in 1939 to an estimated \$200,000,000 last year, an advance of 700 per cent.

In the *inorganic chemicals industry*, the production of \$413,000,000 in 1939 advanced to \$880,000,000 in 1943, an advance of 112 per cent.

The non-coal tar synthetic organic group includes production of butadiene for the synthetic rubber program and methanol and other organic chemicals produced in ordnance plants. The advance in this sector is expected to continue through 1944. The non-coal tar other products classification consists almost entirely of alcohol by fermentation.

The expansion in chemical output in 1943 was due to two factors: the wartime increase in normal industrial markets, and the carrying out of specific wartime programs, such as:

Synthetic rubber which resulted in the spurt in alcohol production, in butadiene, styrene, carbon black, and other raw materials required in the synthetic program;

Military explosives which increased ammonia and toluene manufacture and required substantial new capacity for the production of methanol and sulfuric acid;

Chemical warfare, which made heavy demands for additional chlorine, arsenic, phosphorous, acetic acid, and other chemicals;

Aviation gasoline which called for increased production of chemical additives and lubricating oils, and in benzene, tetraethyl lead, hydrofluoric acid, aluminum chloride, and others.

In addition to these, there are the Allied Products Group which include carbon blacks, coated fabrics, chemical cotton pulp, fertilizers, drugs and pharmaceuticals, paints and compressed gases, all of which boosted chemical production.

The wartime production increase of the industry was facilitated through a sharp plant expansion. Manufacturing facilities of the industry dur-

ing the past four years were increased approximately \$1,200,000,000. This includes the cost of the synthetic rubber program and chemical plants built by Army Ordnance and Chemical Warfare, except where such plants are part of an integrated operation. The synthetic rubber program will eventually cost an estimated \$750,000,000 but was still 25 per cent short of completion at the end of 1943. The military explosives program, with a total estimated cost of \$350,000,000 was almost completed at the end of 1943, as was the Chemical Warfare program with an estimated cost of \$30,000,000.

Detailed production data on individual chemical items for the years 1942 and 1943 are shown in the accompanying tabulation.

U.S. CHEMICAL PRODUCTION DATA

Unit	1942	1943*
Acetylene.....1,000 cu. ft.....	3,235,067	4,026,286
Anhydrous ammonia.sh. ton, 100%....	543,352	494,222
Bleaching powder....1,000 lb., 35-37 †	67,588	57,154
Calcium acetate.....1,000 lb., 80%....	26,692	18,788
Calcium arsenate.....1,000 lb., 100%....	77,796	64,008
Calcium carbide.....sh. ton, 100%....	500,781	564,862
Calcium hypochlorite (true).....1,000 lb., 70% †..	11,321	10,806
Carbon dioxide (liquid and gas)....1,000 lb., 100%....	280,348	288,385
Carbon dioxide, solid †.....1,000 lb., 100%....	505,609	511,505
Chlorine.....sh. ton.....	987,784	1,100,136
Hydrochloric acid.....sh. ton, 100%....	297,099	310,775
Lead arsenate (acid and basic).....1,000 lb.....	63,577	66,985
Methanol, synthetic.....1,000 gal., 100%....	62,344	58,899
Nitric acid.....sh. ton, 100%....	428,624	446,003
Nitrous oxide.....1,000 gal., 100% §	112,327	100,973
Oxygen.....1,000 cu. ft.....	12,874,277	15,129,585
Phosphoric acid.....sh. tons, 50%....	617,269	580,971
Potassium bichromate.....1,000 lb., 100% }.....	10,125	9,210
Potassium chromate.....1,000 lb., 100% }		
Potassium chloride.....sh. ton, 100%....	999,130	993,639
Potassium hydroxide (caustic potash).....sh. ton, 100%....	35,028	37,270
Soda ash, commercial.sh. ton.....	3,788,583	4,014,967
Sodium bicarbonate. 98 to 100%.....	||	||
Soda ash (finished light & dense).....sh. ton.....	136,172	149,760
Soda ash (natural).....sh. ton.....		
Sodium bicarbonate (refined).....sh. ton, 100%....	160,637	158,806
Sodium hydroxide, liquid (caustic soda).....sh. ton.....	939,878	931,095
Sodium hydroxide (lime soda process).sh. ton.....	634,291	607,458
Sodium phosphate, monobasic.....1,000 lb., 100%....	20,934	19,714
Sodium sulfate, anhydrous (refined).....sh. ton, 100%....	57,735	54,248
Sodium sulfate.....sh. ton.....	793,409	737,095
Sulfuric acid (chamber process).sh. ton, 100%....	2,914,722	2,853,523
Sulfuric acid (contact process).....sh. ton, 100%....	4,839,258	4,933,315

* 11 months. † Available. ‡ Dry Ice. § Gas at S.T.P. || Figures not available.

Expansion also was marked in the so-called *Fine Chemical Group* embracing many products in an advanced state of processing and including such items as alcohols, solvents, acids, alkaloids, and salts which find their way into pharmaceutical medicinals, foods, and industrial manufactures.

Sulfa drug production, included in this group, exceeded 9,000,000 lbs. in 1943, a rise of some 500 per cent over prewar totals.

Synthetic vitamins, the antimalarial compound atabrine or quinacrine which is taking the place of quinine, and the antibacterial wonder penicillin are among the recent developments which have found their way into the production of the chemical industry. Penicillin is obtained through the growth of a mold feeding upon a nutrient (corn steep liquor), and the process is painfully slow. The success one company has had in providing penicillin in the near-pure form of a crystalline

salt may be the first step in synthesizing this destroyer of pneumococcic and gonococcic bacteria. (See MEDICINE.)

The war's technological advances have extended the frontiers of research and development. They have expanded the chemical industry's sphere in industry and world markets considerably. Its ability to meet the crushing blow of suspended rubber imports with highly efficient synthetic compounds made from alcohol, coal, and gas, must be set down as one of the greatest chemical accomplishments in the world's history.

Plastics output was accelerated upon our entry into the war to serve in the place of metals and rubber. Plastics quickly found new tasks in aircraft, naval vessels, and army equipment, and on such a scale that virtually their entire production has been denied for civilian use. Because they possess properties not found in other materials, plastics serve more than 1,000 uses on a battleship, several hundred in a bomber. It is estimated that we are now producing plastic and synthetic resin materials at a rate of close to 300,000 tons annually. See PLASTICS.

Despite its record expansion, the chemical industry had to contend with an increasing manpower problem in 1943. This became clearly more pronounced as the year progressed, and is now regarded as a determining factor in all further productive efforts of the industry. Employment showed a slight drop at the end of 1943 which was only briefly compensated by an increase in the work-week with an accompanying increase in average weekly earnings. Details are given in the following table:

CHEMICAL INDUSTRY MANPOWER SURVEY

	Employment (1939=100)	Average Hourly Earnings (\$)	Average Weekly Hours (hours)	Average Weekly Earnings (\$)
1942 January.....	152.8	.949	b	33.28
February.....	154.2	.950	b	33.32
March.....	157.4	.963	b	34.10
April.....	158.1	.974	b	34.98
May.....	158.8	.990	b	36.12
June.....	160.7	.990	b	36.72
July.....	160.2	1.004	b	37.32
August.....	158.9	1.001	43.1	37.76
September.....	159.2	1.014	42.7	37.62
October.....	158.9	1.019	43.6	37.74
November.....	159.6	1.027	43.9	38.10
December.....	161.1	1.032	44.7	38.98
1943 January.....	159.8	1.040	44.5	46.15
February.....	161.3	1.044	44.6	46.23
March.....	161.7	1.047	45.0	47.15
April.....	162.4	1.053	45.5	48.10
May.....	163.2	1.055	45.7	48.53
June.....	166.2	1.064	45.6	49.23
July.....	168.2	1.076	45.3	49.45
August.....	169.3	1.071	45.6	49.94
September.....	171.1	1.086	45.7	50.08
October.....	173.1	1.076	46.0	50.34
November.....	173.8	....	....	....
December.....	173.4*	....	....	....

* Estimated. b New series; back figures not yet published.

Chemical prices last year continued on an even keel. The U.S. Department of Labor Chemical Price Index stood at 96.3 for November, 1943, as compared with a 1942 average of 96.2. The corresponding figure for 1940 was 85.1 and for 1941—87.2. Thus the chemical industry returned to its pattern of stable prices as soon as the initial war impact on its price structure was over. See CHEMISTRY.

H. E. LUEDICKE.

CHEMICAL WARFARE. See BOMBS; CHEMICAL INDUSTRY; CHEMISTRY under *Explosives*.

CHEMISTRY. In 1943 American chemical industry was not found wanting in the performance of its

responsible task as the arsenal of democracy. In August, Donald Nelson reported that the \$14,000,000,000 construction program was nearing completion, with the ammunition and explosives program 95 per cent complete, chemical 90 per cent, shipping 84 per cent, aircraft 77 per cent, high octane gasoline 63 per cent, and synthetic rubber program 61 per cent achieved. Although production statistics are still restricted the following important items were released during the year.

Abrasives. In his Schoellkopf Medal address, Ridgway described boron carbide abrasive for sand-blast nozzles, precision gauges, and tool-steel grinders. Unlike silicon carbide, which distills, B₄C melts at 245°C. and can, therefore, be molded so that the crystals knit together.

Alcohols. Ethanol for smokeless powder, mustard gas, Buna S rubber, and industrial solvents will nearly equal demand next year for 590,000,000 gal.; and there was a 100,000,000 gal. stockpile at the end of 1943. High-proof alcohol production by June, 1944, will be five times that of 1942; these needs are so large that the distillation of whiskey undoubtedly will not be resumed for the duration. In Cuba, failure to agree upon importation price will keep black-strap molasses there during 1944, for conversion into beverage alcohol. Approximately 50,000,000 bushels of Government-owned wheat were made into granular flour for industrial alcohol during 1943; but grain alcohol plants projected for Wisconsin, Iowa, and Illinois in March, 1943, were subsequently cancelled to conserve edible grains. Corn (2,400,000 bushels) marked as a source of alcohol early in 1943 was withheld by the farmers who found it more profitable to feed it to the hogs.

WPB-sponsored commercial scale experiments of alcohol from woodwaste, included the German Scholler process, the Swedish process, and a process developed by the Department of Agriculture. In the latter process, sodium sulfite, by-product of the wood pulp and coke industries, is cooked in water with granular wheat flour. Separate layers form of protein, diastase liquor, and starch. The diastase ferments the starch to sugar, eliminating the use of malt, an expensive ingredient. The Swedish industry is credited with producing 12,000,000 gallons annually from sulfite liquor; a major American company has bought the rights to the Swedish patents and the services of experienced Swedish chemists. Potentially, 40,000,000 gallons of alcohol could be claimed each year from two large lumber-producing western States alone.

Hercules Powder Company announced the production, from waste pine stumps, of hydroabietyl alcohol, a monohydric alcohol of moderately high molecular weight for use in preparing synthetic resin and as a plasticizer.

Alloys. Created to stretch the nation's supply of strategic metals, new alloys include silver and arsenic as a bearing metal to substitute for tin; molybdenum tool steel developed by Westinghouse to replace tungsten from China and Burma; a British soft silver-solder containing a small percentage of tin on a lead base; beryllium-coated copper plates; and an alloy unusually low in nickel and chromium to withstand temperatures up to 750°C., developed at the Battelle Memorial Institute.

Two thousand years ago China issued cast-iron coins to conserve copper. Today history repeats itself. The zinc-coated 1943 steel penny issued, appropriately enough, on Lincoln's Birthday saved 4,600 tons of copper, the quantity consumed in the 1942 one-cent piece; the zinc coating is only

.00025 inches thick. The old penny contained copper, zinc, and tin in the ratio 90/5/5. However, the new copper penny scheduled to appear on Jan. 1, 1944, will return to copper. It is made from discarded cartridge cases, and contains 85-90 per cent copper and the remainder tin and zinc.

Aluminum. During the year 1943 the output of aluminum (q.v.) continued on a tremendous scale. This was reflected in the fact that forty-three spectrographs operating this year in the research laboratories of Alcoa consumed 450,000 feet of film, enough footage to make prints of fifty full-length feature motion pictures. Unlike steel, aluminum rivets are chilled in Dry Ice to -40°C . and then hammered cold within thirty minutes. Storing them in cellophane bags keeps them cold three times longer, saving thousands of dollars spent in re-sorting unused rivets. Spot welding of aluminum is also saving much in labor and material.

Apparatus. Laboratory apparatus is being allocated by WPB to college military-training programs. A high frequency electronic oscillatory system producing *penetrating heat* is being used to case-harden small gears and bearings, to heat-treat tobacco without removing it from the hog-head, to kill insects in grains and cereals, and to glue plywood. The Atlantic Refining Company has perfected a *mass spectrometer* for analyzing aviation gasolines. Harvey has developed a *phosphorescent microscope* by flashing ultraviolet light on phosphorescent metals; it harbingers new discoveries in biology and mineralogy. Goodyear Research Laboratories use *supersonic waves* to locate flaws in rubber tires, as x-rays expose flaws in steel. Brumberg and co-workers in Leningrad described an *ultraviolet microscope* which gives a colored visible image.

Astronomy. Gold and thorium were discovered in the sun by Charlotte Moore, who compared laboratory spectral lines with "low temperature lines" found in the sun spots. Three observatories independently identified NH_3 in the heads of comets. Struve discovered gaseous nickel outside, and titanium and probably manganese inside, stars in the constellation of Libra. M type red stars contain an atmosphere of titanium oxide, and R and N type stars are enveloped in gaseous carbon, according to Lee. Whereas most stars in the Pleiades contain ionized calcium and hydrocarbons, two of these "seven sisters" contain ionized hydrocarbons only; and neutral hydrocarbons, prominent in many stars, are completely missing; Adams considers this to indicate the limited dimensions which these clouds must have. Luminous hydrogen streaming at 1,200,000 miles per hour from the constellation of Auriga was reported by Merrill. The largest prism ever made, measuring 26 inches in diameter and weighing 260 pounds, has been delivered by Bausch and Lomb to the Case School of Applied Science. Temperature changes in Washington, based on observations of calcium clouds in the sun, were correctly predicted 60 per cent of 201 days by the Smithsonian Institution. See also ASTRONOMY.

Awards for 1943. The Chemical Industries Medal was awarded to J. J. Grebe of the Dow Chemical Company for his apparatus for automatic anticipatory control of chemical reactions; the Hillebrand Prize to J. F. Schairer for his work on multi-component silicate systems; the Eli Lilly & Co. prize to H. E. Carter; the Franklin medal to Harold C. Urey for his discovery and production of heavy hydrogen, and to G. W. Pierce for his development of "electrically squeezed quartz crystals" for control of radio frequency and preci-

sion electric clocks; the Willard Gibbs medal to C. A. Elvehjem for his discovery that copper is the oxygen carrier in hemoglobin, for the role of nicotinic acid in animal nutrition and cure of pellagra, and for other studies of trace elements in nutrition; the John Wesley Hyatt medal to F. H. Shaw for his plastic molding process widely used in war production; the Nichols medal to A. B. Lamb for "his investigation in inorganic and physical chemistry, leadership in defense against poison gases, and as a teacher, administrator and editor"; the Mead Johnson award to Vincent duVigneaud for establishing the structure of biotin; and the Schoellkopf medal to R. R. Ridgway for his work on boron carbide. Awards announced for 1944 include the Perkin Medal to G. F. DuBois for his technical developments in Monsanto, and the Nichols Medal to C. S. Marvel for his studies on vinyl polymerization.

Bibliography. The U.S. Property Custodian seized copyrights, and arranged with Edwards Brothers for photolithographic reprints, of original German editions, including Beilstein's 59-volume *Handbuch-der-Anorganische Chemie*, available for \$400 in contrast to the German price of \$2,000.

Cadmium. Ordinarily cadmium electroplating is less than 0.0003 inches thick. By a new process duPont plates small metal parts for airplanes with heavy coats 0.02 inches thick.

Chlorine. A new manufacturing process developed by the U.S. Department of Agriculture utilizes NOCl , HCl , NO_2 , and H_2O , which are by-products of the potash industry. A silica catalyst at 40°C . is employed. Hercules Powder Company patented the removal of sulfuric acid impurities from liquid chlorine, by absorption on coke; acid impurity heretofore ruined metal compressors handling the liquid chlorine.

Coal. A \$2,500,000 five-year research program continues the studies initiated in 1935 by Bituminous Coal Research Inc. Twelve major investigations will affect the bituminous coal consumption, scheduled to reach 600,000,000 tons in 1943. Fluid coal, which is finely pulverized coal mixed with air, will flow through standard pipes. Widening applications are envisioned by the Battelle Institute in forging and heat-treating, in annealing and enameling furnaces, and in other metallurgical processes previously consuming large quantities of petroleum.

Drugs. *Biotin* has been synthesized by Merck & Company; the synthetic product is identical with that announced by du Vigneaud last year.

Penicillin made its public debut during the year 1943. It is grown by three methods: surface culture; bran culture in which bran is moistened with liquid nutrient; and submerged culture in corn steep liquor vats. After growth the mold is concentrated at very low temperatures, closely controlled because of the unfortunate ease of decomposition of the active principle. Next, impurities are removed with an organic solvent, the solvent is separated by evaporation, the residue extracted with a second solvent, the pH delicately adjusted for conversion to the barium salt, and finally a solution of the sodium or calcium salt is prepared and hermetically sealed in ampules. A typical product has a potency of 100 to 400 Oxford Units per milligram, the Unit having been established by a group of Oxford scientists in empirical inhibition experiments. The National Research Corporation has developed a vacuum distillation process for the dehydration step, which Chas. Pfaltzer & Company will use in accelerating their production of the drug. *Science News Letter*,

Nov. 29, 1943, instructs physicians to prepare, in their own laboratories, a supply of penicillin for treatment of local, but not internal, infections.

Manufacturing costs at present are \$50 a gram, enough for ten doses. Pilot plant production was started in the fall of 1941 by Merck, Squibb, Pfizer, the Lederle Laboratories and others. During October of 1943, A. L. Elder was made coordinator of the penicillin program, rigidly controlling the projected production of 27 billion Units annually by a number of companies. DPS produced penicillin in quantity by Nov. 1, 1943, at a \$600,000 plant in Oakland, Calif., operated by the Cutter Laboratories. A submerged culture plant, 25 billion Units annually, by the Heyden Chemical Company, is to be completed at Princeton, N.J., early in 1944. Therapeutic Research Corporation is preparing a selected strain, trade-named *Notatum*, of *Penicillium notatum*, dilutions of one part of which per million inhibit the growth of staphylococcus aureus which causes boils.

Pentothal (a new anaesthetic which has been called one of the greatest drugs of this war) unlike ether and the hydrocarbons, is not an explosive hazard.

Quinine, used throughout the world to control malaria, had a peacetime production of 2,000,000 pounds per year, enough to treat 50,000,000 cases. Today, the urgent demand to protect our fighting forces in the southwest Pacific alone, requires five times this quantity. The substitutes atabrine and plasmochin are being produced at rates of over 100 times prewar levels. Meanwhile, the hunt for additional source of quinine intensified in Peru where the cinchona tree was originally discovered 300 years ago before being transplanted to the Far East. Large plantations are being developed in Guatemala. In addition, a drive to collect quinine from the nation's drug stores netted over 143,000 pounds this year. In November the War Department hinted that it had tested a new antimalarial in the jungles of New Guinea.

Production of the *sulfonamides* is veiled in military secrecy, but in all probability far exceeded the 1942 output of 10,000,000 pounds, which itself was twofold greater than the 1940 figure.

For the use of these drugs, see **MEDICINE**.

Dyes. Sawdust dye, rivaling in color and stability the historic coal-tar dyes, has been reported by *Chemical Age*. Waste sawdust is heated with sulfur and caustic soda to yield water-soluble coloring matter.

Electrochemistry. Development and widespread use of highspeed anode breakers for nearly all mercury arc rectifiers is considered one of the major developments in the field. New electrochemical processes include silver plating on magnesium; the consumption of tons of silver daily for silver-plated bearings for airplane motors, by duPont; a revolutionary pre-treatment with disodium phosphate containing traces of titanium to improve the corrosion resistance of zinc plate, by Westinghouse; and the "B.C.F. addition agent," formula not disclosed, by duPont, one ounce of which per gallon of copper electroplating solution so increases the hardness of the copper deposit on electrotype printing plates that the thickness of the layer may be reduced one-third. See **ELECTRICAL INDUSTRIES**.

Explosives. DuPont announced a high explosive more powerful than TNT. It contains hexamine, which is made from ammonia and formaldehyde. Another explosives intermediate, glycerine, was banned for use in foods, tobacco, cosmetics, and toilet preparations beginning April, 1943, and medical use was restricted to 60 per cent normal.

Propylene glycol, diethylene glycol, and apple syrup are being substituted for glycerine to keep tobacco moist.

Black powder, a mixture of sulfur, charcoal, and saltpeter, used for centuries as gunpowder, has special limited uses in war time: it starts torpedo and depth charges on their sinister journeys; ignites propellant charges in all kinds of shells; and serves as a fuse which detonates anti-aircraft shells, and for signal flares, primers, and other ordnance purposes.

Smokeless powder, chief military propellant, ignites too slowly, and is therefore set off by a charge of quick-flashing black powder. Pellets of smokeless powder with more uniform performance were made possible by duPont and the Western Cartridge Company. Throughout the year, WPC carried a campaign to the housewife for salvaging waste kitchen fats used in producing nitroglycerine for smokeless powder.

First developed in 1936, the amazing material *primacord* is revolutionizing certain military operations. First developed as a substitute for a lead-covered detonating fuse, it can itself tear down trees, set off chemical land mines, or plough a shallow trough in the earth for decontaminating areas containing poison gas. Primacord will stand friction, can be beaten with a hammer, and burns without exploding. Miles of it can be laid to set off a large number of chemical land mines simultaneously, for its explosion travels nearly four miles in a second.

The refineries in the manufacture of TNT are now yielding a purer product. Particularly, munition plant workers today face less hazard of poisoning from nitrogen dioxide fumes than workers in 1917-18. Japan is especially fortunate in obtaining toluene for TNT from the great oil fields of Borneo, and is apparently utilizing this advantage fully. See also **BOMBS; CHEMICAL INDUSTRY**.

Fats. Production of fats and oils is expected to total 5,800,000 tons in 1943-44. Cotton and peanut oil prospects deteriorated in August, 1943, but this was offset by a favorable increase in soybean oil. Castor oil is turning up in unexpected places: as hydraulic fluids in the recoil cylinders of big guns; as shock absorbers on airplane landing gears; and as raw material for sebacic acid in manufacturing nylon. Petroleum chemists have developed two mineral-oil substitutes for palm-oil lubricant in the manufacture of cold-rolled steel, and for olive-oil in wool processing. Boehm and R. Williams discovered that normal propyl gallate strongly inhibits the rancidity of peanut oil.

Fertilizer. Approximately 450,000 tons of nitrogen were consumed in fertilizers for the year ending June 30, 1943. Restrictions on synthetic ammonia were counter-balanced by larger importations, some million tons, of Chile saltpeter. In the year to come, the nitrogen supply will be considerably larger, possibly 700,000 tons; including 685,000 tons of Chile saltpeter, and additional quantities of fixed nitrogen from the synthetic ammonia plants which are now more than meeting the requirements for nitrogen explosives. *Potash* is similarly abundant. Supplies for both this year and the coming twelve months will be 540,000 tons of potash as K_2O . Excellent results are reported in using as fertilizers, since the war began, more than 20,000 tons of potassium flue dust from ferromanganese furnaces. The *phosphate* fertilizer outlook is likewise excellent. Despite the sulfuric acid bottleneck in superphosphate production, 5,600,000 tons of normal superphosphate were distributed within the country this year; and a large part

of our concentrated superphosphate, which totals 3,000,000 tons of 45-47 per cent P_2O_5 , was shipped overseas under lend-lease commitments. At least 7,000,000 tons will be available this coming year. In contrast, phosphate fertilizers in Germany are now only one-tenth prewar tonnage.

Foods. Three billion loaves of bread have been treated with duPont's "Mycoban propionate salts," an inhibitor against molds which each year destroy an estimated total of \$100,000,000 in breads, cheeses, butter, and other foodstuffs. The dairy industry reported 85,000,000 pounds of butter were wrapped in paper saturated with Mycoban this year. Since the production of dried milk in the United States is expected to reach 150,000,000 pounds in 1943, the observation by McFarlane that less than 0.1 per cent wheat germ oil doubles the time dried milk will stay fresh is an important discovery. The Department of Agriculture forecast the possible recovery of a billion pounds of edible proteins from fodder heretofore suitable only for cattle. The process is described above under *Alcohols*.

Glass. Glass made without sand sounds fantastic, but the American Optical Company described such material containing only oxides of boron, aluminum, cadmium, and zinc. Product of ten years of research, the new glasses will provide better camera and microscope lenses. Other new glasses included, by the same company, a secret technique for surfacing nonreflecting eyeglasses and windshields; a Pittsburgh Plate Glass tank lining which resists shock, temperatures of 330°C., and is five times stronger than ordinary glass; glass fiber with tensile strengths of 80,000 pounds per square inch; spun glass for surgical sutures; and safety glass to resist the impact of birds against airplane windshields at high altitudes.

Insecticides and Disinfectants. A third Lethane insecticide, another organic thiocyanate, was announced by Röhm & Haas Company. Dust containing 2 per cent Lethane reduces to half the now scarce rotenone required in insecticides. Brisco in England reported the use of inorganic dusts, such as lime, talc, silica, and diamond as insecticides; their efficiency increased with the hardness of the material and the angularity of the dust particles. While we are fighting the Japanese beetle, Germany is energetically battling the Colorado beetle in France, and lately in Belgium and Holland.

Two plants to be opened in 1944, will increase by 55 per cent the total production of Freon-12 refrigerant. Freon has been adopted by the Government as the dispensing agent for the new aerosol insecticide used to combat malarial mosquitos and other insects in the tropics. To eject the insecticide as fog-like particles, called "aerosols," a one-pound dispenser containing a mixture of highly compressed Freon gas, concentrated pyrethrum, and sesame oil is used. It can discharge the aerosol for fifteen minutes, disinfecting 20,000 cubic feet. We may look to this military invention to rid us of mosquitos and flies in our homes after the war.

DuPont described "Arason" tetramethylthiuramdisulfide, suitable as a nonmetallic seed disinfectant. "Thiosan" is the same product dispersed in water for controlling bentgrass disease. Sterilization of the air, as in air-raid shelters, with triethylene glycol vapor was advocated by Jennings and Bigg; chlorine and propylene glycol have also been used.

See also **INSECT PESTS**.

Iron and Steel. To conserve chromium and vanadium in alloy steels, Merle Randall has developed a special heat treatment for ordinary low-carbon

steel. The steel is heated to 830°C., then suddenly quenched in a 35 per cent solution of caustic soda. The metal can be cold-rolled without difficulty. In Sweden, a cast-iron substitute for roller-bearing steel has been developed to reduce the consumption of copper, tin, and antimony ordinarily used in bearing metals. Stainless steel tubing for 75 and 40 mm. guns is replacing forged steel. Standard Oil has a new process proposing to substitute natural gas, or hydrogen from natural gas, for coke in the blast furnace. As the finely ground iron ore sifts downwards through reducing towers, particles are heated by burning gas to incandescence, then reduced by hydrogen at temperatures about 1300°C. and finally transformed into pig iron by reaction with hot gases containing uncombined carbon. Slag is formed with limestone as in the ordinary blast furnace.

Magnesium. Gigantic increase in magnesium production, nearly 100-fold over 1939, has nearly outstripped immediate consumption. The Pidgeon ferrosilicon process (1943 YEAR BOOK, page 124) today represents an investment of \$40,000,000 in one Canadian and five United States plants.

Government plants produced 15,705 tons in July; Dow plants, 1,750 tons. In August, Basic Magnesium Inc. went into full production in its electrolytic plant near Boulder Dam where 400,000,000 tons of dolomite were uncovered. In Louisiana, Mathieson Alkali is producing over 25,000 tons from dolomite. The ore is calcined with natural gas, converted into chlorides with calcium chloride, and calcium carbonate precipitated with carbon dioxide. The magnesium chloride solution is concentrated and electrolyzed. The Dow plant at Marysville is in operation. Costing \$40,000,000, it uses 1,000 tons of silver bus bars worth \$20,000,000 and loaned by the Government to release copper. This plant is receiving magnesium chloride from Texas until the adjacent Ludington, Mich., brine unit is completed. Both plants incorporate novel features to save strategic materials: enormous wooden beams, plastic pipes, and secondhand boilers, pumps, and laundries.

By January, 1944, Revere Copper & Brass Inc. opened the largest magnesium sheet and strip mill in the United States, with a capacity of over 7,000 tons annually. Meanwhile in North Carolina, Georgia, and the Pacific Coast the Bureau of Mines discovered about 100,000,000 tons of olivine, averaging 47 per cent magnesia. Hitherto a refractory, olivine is under study by Bureau metallurgists. Collins and Glass proposed a reduction of dolomite with calcium carbide.

Metals. Bolivian tungsten tailings containing less than 1 per cent tin, or tin tailings containing less than 1 per cent tungsten, can be profitably treated for tin and tungsten respectively by a promising new process. Zinc and cadmium surfaces are being protected from salt spray by dipping in a chromate solution.

Powder metallurgy has been practiced for over a century in molding platinum and iridium articles. Early in the present century, tungsten filaments for electric lamps were formed from molded briquettes. Today, all types of machine parts and tools are made from particles of single metals: metals that alloy during sintering, metal mixtures that remain unalloyed, and mixtures of metallic and nonmetallic minerals; also, mixtures of metals whose densities are so different that they would separate if melted. Heat-cemented powders of boron carbide, tungsten carbide, tantalum carbide, and titanium carbide form cutting tools nearly as hard as diamonds. Under war-time impetus, many electri-

cal resistance parts have been made from powdered talc and metal mixtures which retain the original electrical characteristics, ordinarily destroyed in alloying. Examples are copper-tungsten, silver-nickel, and tungsten-graphite. Self-lubricating bearings are made from castings sufficiently porous to retain oil throughout the life of the machine. The powders themselves are produced by spraying molten metal into a current of air or steam, by mechanical distillation, by electrolysis, and by gaseous reduction of metal salts. In fabricating an article from metal powder, a mold of hardened steel is prepared of the precise size and shape of the object desired. The metal powder is placed in the mold and a controlled pressure applied. The pressure may be slight, for example in making porous metal filters; or it may be greater than 100,000 pounds per square inch. The shaped object is removed from the mold and heat-treated, "sintered," just below the fusion point of the metal mixture, by passing on an endless belt through gas or electric furnaces in a reducing atmosphere. The sintering knits the particles together so that they emerge with a bright, smooth finish ready for use without machining or finishing. Steel, for instance, is sintered at about 1,100°C. for twenty minutes.

New Materials. In 1940 Minger and Leigh-Smith announced their preparation of element 85 from radium. This year they described a new method for isolating the element, and named it Anglohelveticum in honor of their native countries.

Granular silica gel is now employed in packaging guns, planes, and machinery to prevent rusting and corrosion during transit overseas. No longer is it necessary to slush metal parts with heavy grease, a practice which required laborious de-greasing in solvent baths. A package containing silica gel impregnated with cobalt chloride is sealed up with the machinery in a moisture-proof Pliofilm bag. If the relative humidity of the entire package is above 20 per cent, the threshold above which corrosion occurs, the pink cobalt chloride turns blue, warning the inspector that fresh silica gel bags must be inserted in the package.

Nylon. The miracle fabric and plastic developed by duPont has enlisted in the armed forces for the duration. Parachutes are the largest item: extra tough, special-weave cargo parachutes for lowering cars and jeeps to the ground from planes; parachutes for dropping fragmentation bombs and star shells. Nylon rope developed in 1940 for "on the fly" air-mail pickup, seems to withstand the sudden shock between the cable hook of the plane and the mail container; combines the strength of steel cable with the springiness of rubber. Today in war it was nylon rope that towed the first glider across the Atlantic from Montreal to London. Three times more elastic than manilla, nylon rope is used in training mountain-climbing troops. A half inch nylon rope can lift a load of three tons; in contrast to rubber, nylon under stress of sudden pull stretches rapidly but recovers with a slow gentle bounce, the action required in the perfect shock absorber. Three-quarter million pounds of yarn were used this year in bomber tire fabrics, increasing the strength of the tire so greatly that large bombers and cargo planes do not require larger tires.

Nylon bristles, first appearing in toothbrushes, are now entirely diverted to tapered paint brush bristles, which outlast the hog variety many times over. Because of its resistance to mildew, nylon is ideal for tent fabrics and shoe laces in the tropics. Impregnated with neoprene, nylon is stamped into diaphragms for airplane engine carburetors. Wo-

ven into a cloth containing 30,000 tiny holes per square inch, it is performing the important job of filtering blood plasma for transfusions. Nylon fishing lines, for the time being, have become surgical sutures, millions of feet of which are shipped to medical supply depots the world around.

In the years after the war, nylon once more will grace the feminine leg and charm the masculine eye; for the duPont nylon plants will be able to shift from parachutes to stockings on a few days notice. Drapery and upholstery fabrics, shower curtains and slip covers, will certainly be postwar uses; for crush resistance gives nylon a distinct advantage over older fabrics. Window screens fashioned of this amazing material can be produced in any color, will not stain the sills, will not corrode, and will require no painting. Pencils and sharp-pointed objects can be shoved through the nylon screen without damage. The strength and elasticity of the strands will pull the plastic screen back into place. These new screens will roll up and down on tracks like a window shade, and need not be taken down in the fall. Experimental screens have stood up well along the seashore, where the salt spray corrodes metal screens in a few months. In spinning the nylon "wire" for the screen, the pigment will be incorporated in the nylon flakes so that the color permeates the entire filament and lasts as long as the wire; probably copper-brown wire will be chosen since it is easy to see through dark screens. Once again, as before the war, tennis and badminton rackets will be strung with nylon; fish will be caught on nylon lines; teeth will be brushed with nylon bristles.

So great has been the demand for nylon as a fabric, that its properties as a plastic have been on the whole overlooked. Actually, it always conformed to the common definition of a plastic; and after the war its intrusion into this field is inevitable. Although most thermoplastics soften at 70°C. nylon does not soften until it reaches a temperature of 230°C., a temperature at which most thermosetting plastics melt. It is one of the lightest of the plastics, despite its extreme toughness—specific gravity 1.06–1.19 contrasted with 1.27–1.56 for cellulose acetate. Nylon does not burn or rot; is inert to oils, acids, alkalies, and metal inserts; is easily machined; and can be rolled in standard presses. The first strictly plastic application of nylon was in the manufacture of bearings which require no lubrication, save perhaps water, for light loads at high speeds, or heavy loads at low speeds. Molded military articles, military tubing extruded like macaroni, vacuum packaged films, electric wire insulations applied by nylon in solution, shiny fabric coatings which wear well and do not crack, zippers of molded nylon—these are some of the many applications of nylon as a plastic which hold great promise for future expansion in this entirely virgin field.

Paint. Camouflage has now, in its service, green paints which not only match the foliage in color but also reflect infra-red rays so that they cannot be detected by infra-red photography. The Germans are protecting iron with a new paint material containing barium nitrophthalate. Pulverized garnets, imbedded in a plastic binder, form the basis of a non-skid deck paint developed by Goodyear.

Petroleum. A number of outstanding petroleum authorities disagreed this year on the danger of an imminent oil famine. Per K. Frolich of Standard Oil, in his presidential address to the American Chemical Society, optimistically accepted an estimate of six hundred billion barrels reserve or a three-hundred-year supply. Frolich indicated that

the United States is particularly favored as an oil-producing country; for while its land area comprises only 5 per cent of the earth, it contains 15 per cent of the structure most favorable for the occurrence of oil fields. Back of our oil reserves stand three trillion tons of coal beds, which are already being converted into gasoline, but at a cost double that of natural petroleum.

On the other hand, Benjamin Brooks on two occasions in *Chemical and Engineering News*, warned of the probability of a considerable shortage of natural petroleum within a year or two, and urged extensive development of petroleum substitutes from oil shales, coal, or agricultural materials to relieve an imminent shortage of petroleum precipitated by the war. As early as 1936, Brooks had already forecast the domestic shortage, vigorously denied by some petroleum authorities. He showed that most oil-producing States have passed through their peak in production. America is changing from an oil-exporting to an oil-importing nation, and the discovery of new oil fields is decreasing alarmingly. Moreover, use of petroleum as a raw material for synthetic chemicals will inevitably bring higher price structures. He attacked Egloff's statement that "petroleum is now being formed at a greater rate than our consumption of it, and that all we have to do is to find it." Increasing imports from Venezuela can be anticipated; and we may expect prices to rise as petroleum-bearing countries increase their export taxes. When the price of petroleum has advanced sufficiently, the development of other sources, such as shale oil, will involve operations on an enormous scale which undoubtedly will be successfully projected only by large companies strongly financed and well managed, whose existence depends on tremendous output at small profit per ton of shale.

Approximate costs per gallon in producing gasoline, including normal overhead and 10 per cent depreciation, are compared by Brooks from data furnished by Farish of the Standard Oil as follows: (a) Bergius process, high pressure coal hydrogenation, 22.6¢; (b) European Fisher process, from coal, 19.2¢; (c) European Fisher process, from natural gas at 5¢ per cubic foot, 8.8¢; (d) modern high pressure hydrogenation of petroleum crudes, at \$1.20 per barrel, 5.54¢; (e) modern oil refinery thermal cracking of crude, at \$1.20 per barrel at the well, 5.3¢.

Motor fuel of high octane giving increasing mileage per gallon and resulting in substantial savings in the nation's motor-fuel consumption will tend to offset the increased prices of gasoline over the years to come.

The utilization of petroleum and natural gas for the manufacture of chemicals will continue to expand phenomenally. Most processes for manufacturing these chemicals begin with ethylene or propylene, originally obtained by pressure cracking processes; but newer processes, cracking at higher temperatures or catalytically, have greatly increased the potential output of these olefins, giving in addition, butane and butadiene.

Of these myriad products, butadiene for synthetic rubbers and aviation gasoline received the spotlight in the 1943 arena. Quantitatively, synthetic rubber would consume very little of the petroleum output and its cost after the war will depend on the flow of aviation gasoline, since both require the same raw material. See RUBBER.

The petroleum resources of Germany and Japan were estimated in an interesting analysis by Cities Service Company. Japan's output for 1941 was approximately 8,800,000 barrels, of which 5,500,-

000 were petroleum substitutes. Increase in synthetic oil production raised the total production in Japan in 1942 to 10,000,000 barrels, which was supplemented by 23,000,000 barrels from Burma and Netherlands Indies. In normal times, these two latter countries produce 78,000,000 barrels per year. It is interesting to contrast these figures with Brooks' estimate that the Allied wartime needs may reach 5,000,000 barrels for a single day. Axis-controlled European countries in 1942 produced 112,000,000 barrels, up 20 per cent over 1941. Approximately half of this is synthesized from coal.

So little real information may be released on aviation gasoline, that it suffices to mention that new methods were devised by Universal Oil Products for converting normal pentane into isopentane; by Ipatieff and Heansel of the same company for "triptane," 2, 2, 3-trimethyl butane; by Standard Oil of New Jersey for neohexane; and by Houdry using an adiabatic catalytic cracking unit originally operated semi-commercially for butadiene.

Although the refineries are producing tremendous quantities of aviation fuels, the necessary goals have not yet been attained. War requirements are at least twice the production realized in the 45 aviation gasoline plants now in operation. Losses in aircraft have been less than anticipated, with the result that there have been more planes to fuel.

Postwar motor performance is not hard to guess. In recent tests at Detroit, a stock car adapted to 100-octane ran forty miles to the gallon.

Looking into the future, a number of processes for substitute gasoline have been announced. Egloff estimates that more than 800,000 vehicles, mostly trucks and busses, are operated by producer-gas from wood-chips, charcoal, and other solid fuels. The Bureau of Mines has set up a pilot plant at Pittsburgh for hydrogenating coal to gasoline. The Chinese Army is using a gasoline substitute obtained from pine tree stumps.

The German planes which invaded England in 1940 were fueled with 87-octane; but the English fighters which rose up to meet them were propelled by 100-octane gasoline produced in the United States. The fighting edge afforded by this higher octane fuel contributed largely to staving off the Germans. Comparative tests show that a certain bombing plane using 87-octane reached an altitude of 26,000 feet in 19 minutes, and had an absolute ceiling of 33,000 feet; whereas using 100-octane gasoline it required only 12 minutes to reach 26,000 feet, and the ceiling was 37,000 feet. Ironically, the Japanese are cracking rubber to produce gasoline; while in the United States we crack petroleum to produce rubber.

Petroleum Gases. Natural gas, a complex mixture of compounds of carbon and hydrogen, is produced in 37 of our 48 States. Proved reserves are conservatively estimated at 85 trillion cubic feet and consumption in 1941 was 2.8 trillion feet. This gas is being withdrawn from both "dry gas fields" and "casing head fields"; in the latter, oil occurs along with the gas. In other large oil sources known as "distillate fields" the merchantable gas is returned to the ground, where it is stored for future use.

For a long time natural gas has been used wherever heat is needed, as in fabricating and heat-treating metals, baking ceramics, etc. New outlets for natural gas are concerned with (a) its conversion into liquid fuels, and (b) manufacture of chemical products.

According to *Chemical and Engineering News*, 555,000,000 gallons of liquid fuel were produced from natural gas in 1942. The processes for producing this petroleum are several. (a) Earliest of

these was low pressure pyrolysis, which formed a large number of cyclic compounds especially valuable as blenders in aviation gasoline. Valuable olefins are also produced in this process, as for example ethylene, used in the manufacture of tetraethyl lead and much of our industrial alcohol. (b) A second process, high pressure pyrolysis, utilized 30 per cent of waste butane gases prior to the war, to produce approximately 15,000,000 barrels of premium motor fuel. (c) Dehydrogenation, polymerization, and hydrogenation of these gases gives us high octane aviation fuels. (d) Recently, paraffin alkylation has made possible our present superiority over the Axis nations in aviation fuels, for it was discovered that ordinary hydrocarbons would add onto olefins, giving fuels having octane ratings greatly in excess of 100. (e) Even more recently, isomerization of normal butane to form isobutane has swelled in volume the raw materials needed for the alkylation process. While these volumes are necessarily a military secret, the new facilities constantly being created presage enormous expansion in the use of natural gas in the manufacture of synthetic gasoline.

Natural gas has also become a raw material for many *synthetic chemical products*. The fantastic synthetic rubber program, particularly the Buna S type rubbers prepared from butadiene, is making the greatest demand at this point. Natural gas is also being cracked to produce hydrogen, which eventually finds its way via ammonia and nitric acid into explosive TNT, ammonium nitrate, and nitroglycerine; and glycerine for the latter explosive can also be produced from natural gas. Petroleum gas will make most of the 300,000,000 gallons of toluene, twenty times greater than in the last war, for our TNT. The same petroleum gases can make various plastics, wood alcohol, and detergents.

As enormous as the chemical outlets for natural gas may appear, they still consume but a small percentage of the total available raw material. For example, the prewar production of wood alcohol, both synthetic and from wood distillation, amounted to 20,000,000 gallons; yet, this could theoretically be produced from a single gas well of 10,000,000 cubic feet daily capacity. In other words, the potential production of one of our smaller gas wells would flood the market. Similar comparisons indicate that 1,000,000 cubic feet of natural gas per day would furnish all the carbon tetrachloride sold. Again, in natural gas, there are enough butanes available for conversion into butadiene rubber to supply five times the peacetime rubber demand.

Phosphorus. By 1943 Japan was self-sufficient in phosphate rock from the Islands of Oceania, but Germany was forced into a serious shortage for phosphate fertilizers and phosphorus explosives. See **BOMBS**.

Photochemistry. Infra-red rays in wartime industry today dry military paints, dehydrate fruits and vegetables, and quick-dry greensand used in metal-casting molds. Fluorescent substances, like anthracene, were recommended to trace the penetration of colorless waterproofing compounds into cement, or of fireproofing agents into wood, or of fertilizers into the soil.

Photography, Physics. See separate articles.

Plastics. See separate article.

Proteins. Experiments in Columbia University reveal that certain red molds will feed only on specific amino-acids; this property is proposed as a means of analysis of the amino-acids. From the University of Illinois comes a process which may

release a billion pounds of protein for human consumption each year. By this new process corn germ, hitherto restricted as cattle fodder because of its tendency to become rancid, is de-fatted to give an edible protein containing 21 per cent of protein, 85 per cent of which is digestible as beef protein. In another research, the United States Regional Pasteur Research Laboratory chemically extracted a ton of dried grass to obtain 285 pounds of poultry and hog feed containing 58 per cent protein and less than 1 per cent lignin and cellulose.

Quartz Crystals. The natural mineral is essential in large quantities for making frequency controlling elements of military radio equipment. Success in utilizing lower grades of raw material and in reducing the sizes of quartz plates used in radio sets during 1943 relieved somewhat the extreme pressure for additional sources of this strategic mineral. U.S. deposits in North Carolina, Virginia, California, and Arkansas, although explored, are not contributing significantly to the supply. The piezoelectric properties which quartz possesses and which make it useful for radio communication are found in several minerals and artificial substances but thus far none gives promise of being an immediate and practical substitute for quartz in large scale application.

Rare Chemicals. The National Registry of Rare Chemicals of the Armour Research Foundation has expanded its file of approximately 6,000 chemicals to include common materials scarce because of war allocations. During the year, 2,100 requests for rare chemicals were handled.

Rubber. See separate article.

Soap. Approximately 900,000 tons of soap were produced in 1943, considerably below the 1942 output of 1,400,000 tons. Tallow and grease were diverted to essential war industries. The Government limited fat consumption to 95 per cent, and by August, 1943, to 80 per cent, of the total fats used in 1940-41. Coconut oil, which formerly constituted one-quarter of our soap-oils, became a premium, and dropped below 4 per cent. Soybean, palm, and domestic oils were substituted. Soap formulas prescribed by the War Food Administration increased the rosin content of soap chips and granules to 15 per cent, and that of toilet bars to 2 per cent. Rosin extenders in brown laundry bars increased from 50,000 tons to 125,000 tons; refined tall oil began to appear as a filler in the American product; also, water-glass which is extensively used in German soaps. Meanwhile, all over the world, American soldiers, sailors, and marines lathered themselves with the "soapless soap" detergents which defy seawater and other hard waters.

Sugar. Jackson of Merck & Company reported that natural sugar was large in pantothenic acid, a good source of niacin, and a fair source of thiamin and riboflavin. It is possible that refining removes these. The National Sugar Refining Company reported that carrots lost 50 per cent of total solids, especially sugar, when blanched before dehydrating. Onions and cabbages similarly lost sugar in the cooking process. The Sugar Research Foundation has initiated a five-year research on chemical and nutritional properties of sugar and derivatives, under R. C. Hockett of MIT.

Sulfur. With the loss of Sicily the Axis lost the source of two-thirds of its sulfur; the remaining third comes from northeast Italy. Sulfur is made into sulfuric acid. Chief consumer of the acid is the fertilizer industry, with chemical and explosive manufacture second. America produces over 3,000,000 tons a year, contrasted with the production of

500,000 tons for Italy, 25,000 tons from Spain, and 200,000 tons from Japan, in prewar days. The Nazis will obviously have to rely on their stockpiles, and on sulfur removed from pyrites or salvaged from coke-oven flues.

Textiles. Electron-microscope examination of wool cells revealed little structure in the outside or cuticle, but fibrous structure on the inside or cortex. The difference in behaviour of the two portions of the cell upon dyeing is presumably thereby explained. See *Nylon*, above; also article on *TEXTILES*.

Tin. The new high-speed electroplating of tin strip requires a coating 40–65 per cent thinner, saving 6,000 tons annually. The old hot-dip method is obviously passé.

Tungsten. The rapidly rising war demand for this metal in steel-making and in the tools used to machine and shape metals led to a 77 per cent increase in domestic production in two years.

Vanadium. Production of vanadium, "toughness" for armor plate, guns, machine tools, and other ingredients of victory, was the highest in history in 1943. In 1941 requirements outstripped supply by nearly 40 per cent; in 1942 supply met demand; but in 1943 the estimated supply exceeded the demand by a small margin. Early in 1943 an important vanadium "strike" was made in the former ocean beds now forming the States of Idaho and Wyoming. The area is a potential source of millions of tons of vanadium, but development has not been started because of the reduction in the demand for vanadium. In fact, at the present time Government aid for vanadium production is being discontinued wherever possible.

Water. Thanks to the Permutit Company and the Naval Medical Research Institute the shipwrecked sailor is assured a fourteen day supply of drinking water from his 3.5 pound chemical de-salter. See *WATER SUPPLY*.

Wood. At least five distinct treatments of wood are now recognized: (a) preservation, including flame, insect, rot, and chemical proofing; (b) re-assembly, or making plywood, paper-board, and such products from wood; (c) chemical conversion of wood into cellophane, sugar, alcohols, explosives, lignin adhesives; (d) seasoning and (e) altering chemical properties, as in hardening and increasing its strength.

Termites cause an estimated \$40,000,000 loss per year. Additional destruction by marine borers, decay by fungus growth, and annihilation by fire have made it imperative to protect wood by impregnating it at high pressure with chemicals. Preservatives which have stood the test for decades are zinc chloride and creosote. In 1942, 300,000–000 gallons of the latter were used to preserve 4 billion feet of timber. When odor or painting qualities are objectionable, inorganic salt preservatives are used. The U.S. Department of Agriculture reported that 210,100 pounds of chromated zinc-chloride mixture, 83,100 tons of Waldman salts, 135 tons of zinc meta-arsenate, and 155 tons of copper sulfate-sodium-chromate mixtures were used in 1941; also, large quantities of pentachlorophene dissolved in petroleum. Kaufert and Baehr reported that concentrations of urea greater than 1 per cent completely prevented the growth of wood-rotting fungi; 40 to 100 pounds of urea per 1,000 board feet are recommended. For protecting wood further, zinc chloride or chromated zinc chloride imparts fire resistance. Resinous materials increase resistance to acids and alkalis; other resins give the wood a permanent swell, preventing subsequent shrinkage. New techniques have been introduced by duPont for hardening the softer

woods, and increasing tensile strength in all directions, a most unusual property of wood. Poplar, for instance, can be made as hard as maple. New techniques have developed during the war for gluing wood members, making possible beams of 100 feet and wooden spans of 200 feet in length.

X-rays. See article on *PHYSICS*.

FOREIGN COUNTRIES

Africa in 1938 produced 31 per cent of the world's chromium, 21 per cent of the nickel, 18 of the copper, 11 of the tin, 9 of the platinum, and 40 per cent of the vanadium. Fluorspar, asbestos, and graphite are strategic nonmetallic exports. Phosphate from North Africa, approximately 46 per cent of the world's production, is its most important nonmetallic mineral. African coal deposits, petroleum, lead, and zinc are not important. Stretching from the Belgian Congo down into Northern Rhodesia, is the largest copper region in the world. Along the Mediterranean is the iron-phosphate area. A third great area produces platinum, chromite, and asbestos in the Transvaal and Southern Rhodesia. The war increased interest in the development of raw materials to supply Great Britain. This includes a plant for military chemicals in British East Africa; for power alcohol from white potatoes and maize in Southern Rhodesia; and for asbestos cement, arsenic insecticides, and tanning in Rhodesia. Belgian Congo has expanded its chemical industry in the last few years; it has an annual output of 20,000 tons of sulfuric acid, which are used to treat iron ore. About 170,000 tons of phosphates and 750,000 tons of iron ore were ready for shipment to England in the fall of 1943; in addition, Great Britain will receive zinc, lead, molybdenite and tungsten ore. South Africa is encouraging the recovering of salt by solar evaporation of brine; about 150,000 tons are produced from 60 salt pans in Cape Province and Orange Free State.

Argentine national industries are developing, but there is a scarcity of special machinery and technicians, for until now Argentina has devoted her efforts to the production of meat, hides, wool, and grains. The Armour Research Foundation of Chicago was commissioned to survey the economic resources and industrial development of the country, and reported its findings in *Chemical and Engineering News*, 1943, page 316. For some time Argentina has produced her own sulfuric acid, chiefly from imported sulfur. The country now makes electrolytic caustic soda and chlorine, anhydrous ammonia, and citrates. Plans are being made for a wood distillation plant, and a Solvay soda plant for local glass industries, wool washers, and meat packers. In Argentina 32,636,000 liters of ethyl alcohol were produced in 1941 chiefly from sugar cane and molasses; but by the close of 1942 the Government contemplated large-scale production of power alcohol from surplus corn. The petroleum industry is particularly lacking in trained personnel, although the Government has erected one of the most modern petroleum research laboratories in the world.

Australian chemical industry swells under the impetus of war. Power alcohol from molasses, and phenol for a budding plastics industry, are new items of interest.

Brazil this year has seen the birth of a number of small plants destined to increase the importance of this country in the chemical field of postwar years. Expansion of Brazilian synthetic fiber, dye, soap, and paper industries has greatly increased the demand for caustic soda; and the National Salt

Institute is considering a caustic soda industry. Reputedly the largest iron reserves in the world, containing nearly 25 per cent of the world's known iron ores, are being developed for the growing steel industry to care for the United Nations' war needs. Blast furnaces, coke ovens, open hearth furnaces, rolling mills, and other equipment are being sent there by the United States. In this second year of operation, well over 200,000 tons of steel products will be realized. The Federal Government will purchase all local oil shales, is protecting the alcohol production, and has established two modern research laboratories in Pernambuco and Rio Grande de Sol for processing native ores.

Canada in 1943 produced about 750,000 gallons of alcohol from 7,000,000 bushels of wheat; the manufacture of spirits for beverages has stopped entirely. The explosives program, involving a capital expenditure of some \$140,000,000, is now supplying domestic munitions plants and also provides exports. The twelve Canadian pig iron furnaces handled 2,000,000 tons in 1942. Many medicinal herbs, formerly obtained from Europe, are now being grown in British Columbia; particularly good yields have been obtained from the cascara tree. The British Columbia mercury output is twenty times the capacity of the original plant started three years ago. Linseed oil from Alberta, and flax for linen fiber, are new developments which should continue in value after the war. The paint industry is developing substitutes for tung and perilla oils. The deficiency in copra and palm oils has been met by increased production of flax. To limit expenses in the paint industry, the Government has reduced the number of colors and containers permissible. Rayon is being used in the manufacture of parachute flares and bags for propellants. There were 13,700 tons of filament and spun rayon yarns consumed in Canada in 1942. Government production of synthetic rubber has been centralized in Sarnia, Ontario, where a plant operated by Polymer Corp. Ltd. was in full production by Nov. 1, 1943. It represents an investment by the Government of approximately \$45,000,000. The styrene plant is sufficiently advanced to produce 6,000 tons per year; but the copolymer plant will depend upon the importation of butadiene from the United States. Two plants, with a total capacity of 30,000 tons of butadiene annually, are to be completed by the end of 1943. Scientists of the National Research Council have pioneered the production of butylene glycol from wheat. If all of Canada's rubber requirements were made from a wheat base, it would utilize no more than 20,000,000 of the 798,000,000 bushels of Canadian wheat in storage as of Mar. 31, 1943. Shortage of starch has led to an improved method for separating starch from the gluten fraction of wheat and flour. Sulfuric acid 66° Bé totaled 578,474 tons in 1942, more than double the 1937 output. Dehydrated cereal grasses as poultry and dairy feed are being manufactured from British Columbian grasses. The \$35,000,000 expansion program in the nickel industry increased 1942 output 25,000 tons over that of 1940.

Chile extended its contract with the U.S. Metals Reserve Company until Aug. 1, 1944, which places copper ore and concentrates at our disposal; makes available manganese, tungsten, mercury, and vanadium ores; and increases the mining of zinc, lead, and cobalt ores in the Department of Ovalle. The production of coal within Chile has not satisfied industrial demand; previous to the war, Chile imported 200,000 metric tons annually from England.

In Colombia, a national chemical laboratory, rep-

resenting an investment of over \$300,000, will seek to develop native products. Experts from the United States have been consulted on the development of the Colombian diet and health, and for a survey of cinchona bark for quinine. Valuable exports include chromite, mercury, zinc, quartz, and \$1,500,000 of platinum.

Czechoslovakian chemical industry was enormously stimulated by the transfer of patents from Germany. These included synthetic rubber, cell wood, lignite fuels, sulfuric acid, and insecticides. Interest increased in domestic ores such as antimony and pitchblende.

Eire chemists have produced a carrageen moss emulsion as a substitute for wool oils; are testing vegetable dyes, particularly "crotol," a brown dye made from rock lichen; and have erected a carbide factory utilizing native limestone and anthracite.

English cosmetics are now made under licensing system that prohibits useless or harmful cosmetics. Fertilizer problems have been many. Although North African phosphate will increase during the coming year, imports from the United States will be reduced. The use of borax as a fertilizer to offset boron deficiency is increasing; Scottish lime will increase to well over 200,000 tons in 1943-44.

Finland, because of Germany's inability to transport and absorb her export articles, particularly timber and wood pulp, is making great effort to utilize wood in such industries as gas fuel, the manufacture of yeast, and the Wuorinen wood process. The latter converts the carbohydrates in wood into simple sugar. A new plant, erected for this process, will produce 10,000 tons of power alcohol annually, dextrose for food canning, fodder yeast for imported proteins, and lacquer for plastics.

French chemical products are under severe German control. An organization has been formed in Paris to meet the motor fuel shortage with substitutes other than power alcohol. Fat shortage is so acute that tallow has been made available for food purposes and the fatty acid content of soap has been reduced to 10 per cent. The mild climate in Alsace-Lorraine has caused German authorities to increase cultivation there of medicinal herbs, which this year total nearly 1,500 tons, six times more than in any other German province.

German efforts to operate German processes in other European countries have often proved disappointing because the processes are closely adapted to raw materials available only in Germany. Germany's fuel, rubber, and resins, for instance, are based on coal and lignite, but there are not sufficient quantities of these raw materials outside Germany to provide a surplus. Synthetic fuels in France are based on domestic shale oil; and in Italy on asphalt, where German experience is of little use. Artificial silk and cell wool in Germany is obtained from wood cellulose, but Holland, Belgium, Italy, and Spain have paid more attention to annual plants and reeds which flourish locally. Again, Finland and Sweden have found their own process for wood hydrolysis superior for their own raw materials, even though Germany possessed considerable experience in this field.

Insecticides are greatly restricted: copper sulfate is available to vine growers only; copper oxide for fungus disease, but not for spraying fruit trees; Derris root only for oleaginous plants and cabbages. Borax is available as a sugar beet and fodder fertilizer in the same quantities as last year. The fertilizer situation is very serious. Phosphate quotas were only 30 per cent of prewar allotments, now that North Africa is cut off; nitrogen fer-

tilizer is only 60 per cent, 10 per cent below 1942; lime, previously widely available, was placed on the quota basis this year for the first time; even potash, of which Germany has ample supplies, has been reduced 10 per cent. The cell wool industry is making slow progress since the cost of raw materials has increased. Leather substitutes are usually poor.

Sulfuric acid is a serious shortage, threatened by the conquest of North Africa, which formerly supplied three-fourths of the raw material, pyrites. Germans will attempt to offset this by increased production of domestic pyrites, and by recovery of sulfur from coke-oven gas and from the synthetic fuel factories. The uneconomical processing of gypsum, in particular, has again been introduced; a capacity of 80,000 tons of sulfuric acid by this process was reported at Leverkusen.

Nazi plunder and control is aimed at an industrial empire extending even into Spain. The key organization in this exploitation of Europe is Reichswerke Hermann Goering, A-G. founded in 1937 to develop the German iron deposits. It now embraces practically every field of heavy industry including mines, machines, transportation on inland waterways, electric power resources, the light metal industries, and the artificial fiber developments. Wherever transportation becomes serious, regional arrangements have been made; thus the heavy industries of Alsace-Lorraine are utilizing the Ruhr coke.

In Hungary facilities have increased in the aluminum plant at Felsögalla. There are enlarged carbide and ferrosilicon plants, and a methane-from-sewerage unit in Budapest. Hungary continues as an important exporter of medicinal herbs, now at a rate of 1,000 tons a year.

Indian research is sponsoring a number of new industries, including substitutions for cork and window glass; calcium carbide; urea for the plastic industry at Mysore; and formaldehyde, phosphorus, and titanium dioxide at Bangalore. A National laboratory is to be erected at Poona from contributions of Indian industrialists, particularly Tata Sons.

Mexico is increasing her production of oil-bearing seeds, chiefly sesame, cottonseed, peanuts, and castor beans. Before the fall of Singapore, Mexico imported large quantities of coconut oil.

New Zealand phosphate deposits of 100,000,000 tons were discovered in Clarendon. Local consumption amounts to 350,000 tons of phosphate fertilizer annually.

Norwegian electrochemical and electrometallurgical industries have disappointed the German industrialists, chiefly because these industries in the prewar period increasingly relied on foreign raw materials, now cut off by the blockade. Accordingly, the German economic leaders attach greater importance to nickel, aluminum, and ferro-alloys, previously produced in small quantities, than to electrochemicals like calcium carbide and nitrogenous fertilizers which were, before the war, produced chiefly for export. Shortage of motor fuel stimulated the use of mobile producer-gas units. The development of the German cell wool process, utilizing Norway's immense wealth of wood pulp for a synthetic fiber industry, seems to await the arrival of machinery and necessary chemicals from Germany. In southern Norway, a factory is manufacturing cloth from seaweed.

Palestine chemical plants newly erected include manufacture of solvents in Jordan, liquid ammonia and insecticides at Tel Aviv, nitric and sulfuric acids at Haifa, ethyl chloride in Jerusalem, and

lactates and lactose made from carbide in Palestine.

Polish chemical raw materials are being controlled by a German Bewirtschaftungsstelle, which considers artificial fertilizers and tanning chemicals of prime importance, followed by soda.

Russian industrial growth over the past three decades is examined by Toplin in *Chemical and Engineering News*, 1943, p. 166. He briefly discusses their synthetic rubbers, oil-bearing areas, fertilizers from phosphates, potash deposits, and the extraordinary educational advance reflected in their scientific literature. In 1942 there were over 50,000 chemists, and 660,000 college students.

The Spanish Director General of Industry has authorized several chemical industries. A large electrochemical factory will expand its output of explosive intermediates, including ammonia, methanol, urea, acetone, and acetic acid; and a company will manufacture camphor on a scale sufficient to meet all domestic requirements, including that needed for 500,000 tons of celluloid annually. Encouragement has been given in the recovery of glycerol from fats, and oil hardening plants will begin operations soon. Efforts are being made to increase production of formaldehyde and synthetic methanol, both for domestic use, and for an expanding synthetic resin industry. Superphosphate and potash plants have been authorized, and a factory at La Feiguera will manufacture 50,000 tons of ammonium sulfate from coke-oven gas; 25,000 tons of nitrates were shipped by the United States to Spain for rehabilitation purposes. In general, progress is hampered by lack of machinery. Difficulties in exporting pyrites have stimulated interest in utilizing their arsenic and copper impurities as insecticides. The lignite deposits at Teruel and Berga and the bituminous shales of Ciudad Real may be used in distillation plants. Utilization of these mineral resources is under consideration by the Spanish National Institute of Industry. The largest pharmaceutical manufacturer in Spain, Faes, formed in 1935, employs about 400 persons and manufactures inorganic medicinals, saccharin, hexamine, acetanilide, and amidopyridine. Spain's annual supply of 10,000 tons of turpentine and 35,000 tons of colophony heretofore exported, is now being diverted into synthetic camphor, fuel, and rubber.

Sweden agreed to supply Germany this year with cellulose pulp, about 100,000 tons, during the first six months of 1943. In turn, Germany agreed to ship to Sweden 30,000 tons of soda, 30,000 tons of calcium chloride, 5,000 tons of water glass, 220,000 tons of salt, 60,000 tons of Glauber salts, 100,000 tons of potash salts, 3,800 tons of cell wool, 1,200 tons of artificial silk, and 1,800 tons of Buna rubber.

In general, Sweden's chemical industry has succeeded in obtaining sufficient supplies. The production of mineral acids has increased and, while the superphosphate industry has curtailed its demand for sulfuric acid, production of the latter has actually increased for use in the production of cell wool, of sugar from wood, and in explosives.

A laboratory for testing war materials under conditions of extreme cold is to be in operation by the end of 1943. A plant to produce 6,000 tons of aluminum from Swedish andalusite has been in operation nearly a year near Sundsvall, and expansion of this aluminum company has been subsidized by the Government. A new plant for the manufacture of calcium cyanamid for fertilizer will be erected in Västergötland, but will not be completed for two or three years. The German coke process, rather than the Norwegian electrical fixa-

tion will be employed. Annual output will be about 40,000 metric tons, previously imported from Norway. Total nitrogenous fertilizer consumption in Sweden averages 200,000 metric tons.

Many products from wood were developed to keep the Swedish cellulose plants in operation following the cessation of their enormous wood exports. Yeast from wood-pulp is being sold in Stockholm as a substitute for meat. The yeast is obtained from residual pentose sugar left when sulfite lye has been used for making alcohol. These sugars are isolated and fermented to give a white solid mass of the same consistency as ordinary yeast for baking. Capacity of the plant may reach 20,000 metric tons annually. The yeast contains 50 per cent albumen, whereas ordinary meat contains only 20 per cent. Also, several new solvents from sulfite alcohol have been produced to replace heavy naphtha and French turpentine, imports now curtailed by war conditions. New elastomers and coatings include Swedish ethyl cellulose and a polysulfide rubber produced in the Wenner-Gren Institute from the ligno-sulfonic acids in sulfite lye. Ethyl chloride is being used extensively in bleaching. Quantitatively, the manufacture of fodder cellulose was of very great importance. Expanding industries include domestic kaolin to replace the 40,000 tons formerly imported from England for paper and porcelain; 16,000 tons of edible oils, double 1942 quantities; shale oil production in Kvarntorp to double by 1944; and 12,000 tons of lead by new mining and smelting ventures. Svedberg is being provided with a factory and research laboratory near Uppsala for synthetic rubber production.

Swiss interests in plastics and elastomers are great. Local materials being utilized include coal and lignite, sand for glass, artificial cryolite, and gypsum for sulfuric acid in making fertilizer. After the war East Asia may ease Swiss loss of pharmaceutical markets in those American countries which have now established their own factories.

See the separate articles on mineral products.
HUBERT N. ALYEA.

CHEMOTHERAPY. See **MEDICINE.**

CHESS. The United States Chess Federation and New York State Association combined efforts in one tournament to decide the Empire State and open titles in 1943 and when the summer gathering of experts in Syracuse had broken up both championships were in possession of Israel Horowitz of New York City. The 1942 State king won in a close duel with Anthony Santasiere. Neither lost a game, but an extra draw left Santasiere in second place. G. O. Christenson of Brooklyn won the experts' tournament and Louis Persinger of New York was first in Class A.

The Sturgis-Stephens Trophy, emblematic of the U.S. Federation amateur title, was won by Dr. Ariel Mengarini of Washington, D.C., and Reuben Fine of Washington captured the national speed championship test. Yale defeated Harvard for the H.Y.P.D. College League title and City College of New York again triumphed in the Eastern Intercollegiate League.

A new world record for blindfold play was set by Michael Najdorf of Poland at Rosario, Argentina, in October. Playing against 80 opponents at 40 boards, he won 36 games, lost 3, and drew in 1.

THOMAS V. HANEY.

CHICAGO. See **RAPID TRANSIT; ROADS AND STREETS; SANITATION; WATER SUPPLY.**

CHIEFS OF STAFF. See under **JOINT** and **COMBINED.**
CHILDBIRTH. See **MEDICINE** under *Continuous Caudal Analgesia.*

CHILD CARE COMMITTEES. See **CIVILIAN DEFENSE, OFFICE OF.** Compare **DAY CARE.**

CHILD LABOR. See **CHILDREN'S BUREAU; JUVENILE DELINQUENCY; LABOR CONDITIONS.**

CHILDREN IN WARTIME. Commission on. See **JUVENILE DELINQUENCY.**

CHILDREN'S BUREAU. The activities of the Children's Bureau of the U.S. Department of Labor during 1943 centered on the development and application of policies for conserving under wartime pressures and strains the health of children in the broadest sense, their home life, educational opportunity, and community resources for their protection. Important steps were taken in the provision of maternity and infant care for wives and infants of enlisted men in the armed forces; in the development of community programs for care of children of working mothers; in the formulation of coordinated programs for the prevention and control of juvenile delinquency in wartime; and in the development of safeguards for young workers.

Other special fields of wartime activity for the Bureau included making studies, giving consultation service, and issuing reports on the policies of industrial firms toward the employment of pregnant women, the selection and training of volunteers in child care, health standards for young workers, standards for hospital care of maternity patients and newborn infants under wartime conditions, food requirements of mothers and children in relation to rationing, services for unmarried mothers, adoption of children, guardianship, home-maker service, group-work and recreation programs, the prevention and control of juvenile delinquency, the practice of holding children in jail, curfew ordinances and their social implications, and the needs of children in minority groups, especially Negroes.

On the recommendation of the Children's Bureau Commission on Children in Wartime the Bureau prepared and issued a six-point program of community action for children in wartime, a letter to parents designed to help them deal with the psychological effects of war on their children, and a community program for the prevention and control of juvenile delinquency. (See also **JUVENILE DELINQUENCY.**) The needs of Negro children and the health, welfare, recreation, and vocational-training services available to them were given special consideration at a conference called by the Children's Bureau in December, 1943. See **NEGROES.**

Maternal and Child Health and Welfare Programs. The three programs for which the Children's Bureau carries administrative responsibility under the Social Security Act (title V, parts 1, 2, and 3) continued in operation throughout the year in the 48 States, the District of Columbia, Alaska, Hawaii, and Puerto Rico. The Bureau receives annual appropriations for grants to States under these three programs as follows: For maternal and child-health services, \$5,820,000; for services for crippled children, \$3,870,000; and for child-welfare services, \$1,510,000. Consultation service to the State agencies that administer these programs was furnished through the Bureau's regional staff, which includes physicians, nurses, medical-social consultants, nutritionists, and child-welfare consultants.

Emphasis was placed in the programs for maternal and child-health services administered by

State health agencies on preventive measures and on so organizing the program as to make it possible for the limited medical and nursing personnel available under war conditions to reach the largest number of mothers and children through child-health conferences, including immunization clinics, through prenatal and postnatal medical and nursing services, and through health supervision programs for school children.

Rapid expansion marked the program of maternity and infant care for wives and infants of enlisted men in the four lowest pay grades of the armed forces, initiated by the Bureau in 1942 in connection with maternal and child-health services. In March, 1943, for the first time the program received a separate appropriation of \$1,200,000 to cover the remainder of the fiscal year. Appropriations amounting to \$23,000,000 were authorized for grants to State health agencies for emergency maternity and infant care during the fiscal year ending June 30, 1944. By Dec. 31, 1943, plans were in operation in all States and Territories except North Dakota and Puerto Rico and more than 161,000 cases had been accepted for care. The maternity care provided under these plans includes medical care during pregnancy, delivery in a hospital or at home, and postnatal care. Infants may receive medical and hospital care as needed during the first year of life.

Crippled children's services were maintained in spite of the withdrawal of hundreds of surgeons, nurses, and physical therapists for war services, shortages in hospital facilities, transportation difficulties, and the scarcity of metal appliances. The number of children listed on State registers of crippled children maintained by State crippled children's agencies was approximately 354,000 as of June 30, 1943.

In connection with a campaign to educate people in the prevention and treatment of rheumatic fever in children, in which the Bureau cooperated with the Metropolitan Life Insurance Company and the American Academy of Pediatrics, a national conference on the development of State rheumatic-fever programs was held at the Children's Bureau in October, 1943. Sixteen States have developed rheumatic-fever programs as a part of their services for crippled children.

The program for child-welfare services was faced with a multiplicity of long-standing problems intensified by war conditions. Children's Bureau consultants aided State welfare agencies in planning child-welfare services for congested war areas, in developing State and local programs for care of children of working mothers, and in developing protective services for children and young people in danger of becoming delinquent. Federal funds were used to pay some 650 social workers employed in State or local child-welfare programs as of June 30, 1943. Of these workers, about 300 were in rural areas, 75 were in areas of special need, usually centers of war activity, and the remainder were on the staffs of State welfare agencies giving consultation service to local communities. Close to 41,000 children were receiving case-work services through these programs in May, 1943, and many more would have been receiving service if sufficient trained personnel had been available.

Services for Children of Employed Mothers. The Bureau continued to give informational and advisory service on community programs for the care of children of working mothers. From August, 1942, to the end of June funds for developing programs were granted to States by the Office of Defense

Health and Welfare Services (see **FEDERAL SECURITY AGENCY**), on the basis of plans approved by the Children's Bureau and the Office of Education, to 28 State welfare agencies and 33 State education agencies. On June 30, a bill (S. 1130) proposing the administration by the Children's Bureau of grants to State public welfare agencies for day-care services and the administration by the United States Office of Education of grants to State education departments for extended school services was passed by the Senate. This bill was still pending before the House Committee on Education in December. Since June, 1943, therefore, the only Federal funds available for programs for children of working mothers have been those administered by the Federal Works Agency under the Lanham (Community Facilities) Act. The Children's Bureau reviewed and certified need on local projects for group-care services which were referred to it by the FWA.

Safeguards for Young Workers. In July, 1943, when the number of young workers on farms was at its height, the total number of minors 14 through 17 years of age employed full time or part time was estimated at 5 millions. (See **LABOR CONDITIONS**.) The Children's Bureau and the Office of Education undertook a back-to-school campaign encouraging boys and girls to return to school in the fall and to regard the completion of their education as their best contribution to the war effort and to the country's postwar needs. By October the number of young workers had decreased by about 2¼ millions, leaving some 2¾ millions of boys and girls 14 through 17 years of age still at work. These figures do not include the many children under 14 years of age known to be at work, mostly in part-time jobs.

The interest of the Children's Bureau, the Office of Education, and the War Manpower Commission in maintaining protective measures for young workers and in restating essential principles which should govern their employment in wartime, led to the issuance in 1943 of three statements of policy. In general these policies call for observance of State and Federal labor standards; a minimum age of 14 years for either full-time or part-time employment, 16 years for employment in manufacturing occupations, and 18 years for hazardous work; a maximum 8-hour day, 48-hour week, and 6-day week for minors under 18 with certain safeguarded exemptions; limitations on part-time and vacation employment of school youth under 18; payment of the same wages paid to adults for similar job performance; and safeguards for children employed in agriculture, especially if living away from home.

Administration of Fair Labor Standards Act. The Bureau administers the child-labor provisions of the Fair Labor Standards Act of 1938 which set a basic minimum age of 16 years for employment in or about establishments producing goods for interstate commerce and 18 years in occupations found to be particularly hazardous. No new hazardous-occupations orders were issued during the year. The Bureau issued a series of advisory standards, not having the force of law, intended to guide employers in war industries in selecting occupations suitable for young workers. The industries covered are shipbuilding, lead and lead-using industries, employment involving exposure to carbon disulfide and to chlorinated solvents, welding occupations, operation of metal-working machines, and the aircraft industry.

The cooperative administrative system developed by the Children's Bureau to prevent child-

labor violations and protect employers—Federal-State agreements whereby State employment and age certificates are accepted as proof of age under the act—was continued in 44 States, the District of Columbia, Hawaii, and Puerto Rico. In 4 States where there is no State system of employment-certificate issuance, the Bureau issued Federal certificates. Regional child-labor consultants on the Bureau staff are responsible for the general development and coordination of age-certificate and inspection programs, including cooperation with the regional staff of the Wage and Hour Division of the Department of Labor and with State labor and education agencies.

The strain placed on State facilities and staffs by the large numbers of boys and girls flocking into the labor market has been very great. Employment certificates issued for full or part-time employment of minors 14 through 17 years of age in June, 1943, for example, were more than double the number issued in June, 1942, totals in some localities rising to 4 or 5 times the 1942 figure.

This Federal law, as well as State child-labor legislation, undoubtedly checked to some extent the unwise exodus from school of children under 16 and helped to withstand the increasing pressure to break down standards for child and youth employment. However, the illegal as well as the legal employment of children increased. Inspection cases under the Federal act closed during the fiscal year 1943 disclosed 1,722 establishments in violation of the child-labor provisions, an increase of 33 per cent over 1942 and 197 per cent over 1941. The number of minors found in illegal employment in 1943 was 4,567, an increase of 12 per cent over 1942 and 159 per cent over 1941. Of these children, 800 were under 14.

Although the Bureau has consistently sought to bring about, through educational means, compliance of employers with child-labor provisions of the Fair Labor Standards Act the number of legal actions instituted because of persistent violations has gradually increased.

International Cooperation. The Children's Bureau participated in the program of inter-American cooperation developed by an interdepartmental committee under the auspices of the Department of State by furnishing consultation service on request to the American International Institute for the Protection of Childhood and to the Governments of several American Republics. The Council of the Institute met at the headquarters of the Institute in Montevideo, Uruguay, in May, 1943, with the Chief of the Children's Bureau representing the United States, to consider preliminary reports on nutritional problems of the children of the Americas and to act on proposals for reorganization of the Institute. The Republics where consultation service was given by the Bureau to official agencies concerned with child health and welfare were as follows: Bolivia, Brazil, Chile, Costa Rica, the Dominican Republic, Ecuador, Mexico, Paraguay, Uruguay, and Peru. Several of the Children's Bureau bulletins for parents were translated into Spanish and Portuguese by the State Department for distribution in other American countries.

At the request of the Office of Foreign Relief and Rehabilitation Operations (q.v.) the Children's Bureau provided informational and advisory service on the needs of children and on prewar facilities for child care in areas occupied by enemy forces for use in planning for food, shelter, clothing, medical care, and other essential services for children in liberated areas. A member of the Bureau staff served on the Technical Secretariat for

the United Nations Conference on Food and Agriculture held in Hot Springs, Va., in May, and acted as secretary of the committee dealing with consumption levels and requirements. This Conference gave clear recognition to the obligation of governments to meet the special needs of "vulnerable groups," including infants, children, and pregnant and nursing women.

KATHARINE F. LENROOT.

CHILDREN'S FUND OF MICHIGAN. See **PHILANTHROPY** under *Foundation Activities*.

CHILD WELFARE. See **CHILDREN'S BUREAU**; **CIVILIAN DEFENSE**, **OFFICE OF**; **FEDERAL SECURITY AGENCY**; **PSYCHOLOGY**; **SOCIAL SECURITY BOARD**; **STATE LEGISLATION** under *Social*; also organizations listed under **PHILANTHROPY** and **SOCIETIES**; **AMERICAN LEGION**, etc.

CHILE. A South American republic. Capital, Santiago.

Area and Population. Area, 286,396 square miles; estimated population in 1942, 5,178,260 (4,287,445 at 1930 census). Chileans of the upper and middle classes are predominantly of European (chiefly Spanish) origin, but there is a considerable Indian strain in the lower class. The settlement of southern Chile was done mainly by German immigrants. The 105,463 aliens living in Chile at the 1930 census included 23,439 Spaniards, 11,070 Italians, and 10,861 Germans. In 1941 there were about 1,281 United States citizens and 5,300 British subjects in residence. Estimated populations of the chief cities in 1941 were: Santiago, 639,546; Valparaíso, 245,000 (including suburbs); Concepción, 77,658; Antofagasta, 60,000; Viña del Mar, 50,000; Iquique, 46,000; Talca, 45,000; Chillán, 39,500.

Defense. Under the compulsory military service system, all youths of 20 are called to the colors, mostly for nine months, and then serve in the reserve until 45. As of Jan. 1, 1941, the active army numbered 40,915 (including some 20,000 regulars) and trained reserves 212,000; active air force, 1,912 men, with over 100 airplanes. The active army was expanded and supplied with some new equipment from the United States during 1942. The navy comprises 1 battleship, 3 cruisers, 8 large destroyers, 9 submarines, and various auxiliary vessels, manned by about 8,000 men in all. A United States military aviation mission was engaged in 1940 (see *History*).

Education and Religion. Elementary education is compulsory, but about 25 per cent of all adults remain illiterate. In 1940 there were estimated to be 900,000 children of school age, of whom 583,664 were enrolled in public schools and 90,595 in 834 private schools. Of the private schools, 657 received state aid. The five universities had 6,448 students in 1939. Roman Catholicism is professed by the great majority of Chileans, but the Church was disestablished in 1925.

Production. At the 1930 census, 37.8 per cent of the working population was engaged in agriculture and 22.1 per cent in industry and mining. Estimated yields of the chief crops in 1942-43 were (in metric tons): Wheat, 853,629; oats, 77,084; rye, 6,278; forage barley, 40,063; malting barley, 30,865; beans, 76,615; potatoes, 477,997; tobacco, 6,500. The 1942 hemp crop was 14,635 metric tons. Lentils, peas, corn, and rice are widely grown. The 1941 wine yield was 2,416,117 hectoliters (hectoliter equals 26.42 U.S. gal.). A total of 1,152,306 sheep carcasses were processed at the

freezing plants in 1942. Wool clip in 1939, 13,600 metric tons.

Mineral production was (metric tons): Nitrate, 1,408,491 in 1941; copper, 37,794 in 1941; iron ore (exports only), 1,621,692 in 1941; manganese, 21,400 in 1941 (exports only); coal, 2,148,000 in 1942; cement, 360,000 in 1942. Gold output in 1942, 5,826,800 fine grams, about one-half of the peak production of 1939 and 1940. The mining industry had an average of 63,181 workers in 1940; lumbering, 14,611. There were about 5,585 industrial establishments, with a total of 296,200 employees.

Foreign Trade. Merchandise imports in 1942 were valued at 621,480,000 gold pesos (524,880,000 in 1941); exports, 861,840,000 gold pesos (767,880,000 in 1941). For the leading items and distribution of trade by countries in 1941, see 1943 YEAR BOOK. Exports to the United States in 1942 were 50 per cent higher than in 1940 while exports to Latin American countries advanced nearly 200 per cent.

Finance. Estimated 1943 budget receipts and expenditures balanced at 3,186,000,000 pesos, including loans. The Comptroller General reported that actual revenues in 1942 were 2,954,000,000 and expenditures 3,052,000,000 pesos; budget deficit, 98,000,000 pesos (265,100,000 in 1941). The accumulated deficit on Dec. 31, 1942, was 675,500,000 pesos. Direct public debt on Dec. 31, 1942, 4,968,000,000 pesos, divided as follows (in millions of pesos): External, 1,898; internal, 2,111; banking advances, 323; port-works obligations, 21; obligations of Reconstruction and Development Corporations, 615. In addition there was a government-guaranteed debt of 1,278,000,000 pesos (internal, 460,000,000; external, 818,000,000).

The peso of sixpence gold is used only for certain statistical purposes. Official exchange rate of the Chilean peso during 1941-43, \$0.0516; export draft rate, \$0.0400; free rate, about \$0.0323.

Transportation. Chile in 1942 had over 5,500 miles of railway line (over 3,637 miles owned by the state), some 27,000 miles of roads and highways, and national and international air services connecting the principal cities. Under construction in 1943 were a trans-Andean railway from Antofagasta, Chile, to Salta, Argentina, and a modern highway between Santiago and Concepción. On June 30, 1940, Chile had a merchant marine consisting of 106 vessels of 160,232 tons gross. The U.S. Government in 1943 purchased Chile's three largest steamers for \$2,000,000 each. To replace them until the end of the war, it leased four 8,000-ton merchantmen to the Chilean-owned South American Steamship Co.

Government. The Constitution of Oct. 18, 1925, vested executive powers in a President, elected by popular vote for six years and ineligible to succeed himself, and legislative powers in a popularly elected Congress consisting of a Senate of 45 members serving for eight years and a Chamber of Deputies of 147 members serving four years. President, Juan Antonio Ríos, who assumed office Apr. 3, 1942, following his election on Feb. 1, 1942, by a coalition of Leftist parties. As a result of the elections of March, 1941, the Chamber of Deputies was divided into two blocs, as follows: Leftists, 85 (Radicals, 44; Socialists, 15; Communists, 15; Democratic, 9; Workers, 2), and Rightists, 62 (Conservatives, 32; Liberals, 22; Falangists, 3; Agrarians, 3; Vanguardists, 2). The Cabinet appointed Oct. 21, 1942, consisted of 6 Radicals, 3 Socialists, 1 Democrat, and 3 non-party men. For 1943 developments, see below.

HISTORY

Break with Axis. The long controversy over Chile's neutrality policy, arising from its failure to carry out the recommendations of the Rio de Janeiro Conference of American Foreign Ministers, ended on Jan. 20, 1943, when President Ríos announced the severance of diplomatic and commercial relations with Germany, Italy, and Japan (see 1943 YEAR BOOK, p. 133, for background). The breaking off of diplomatic and consular relations with Vichy France, Bulgaria, Hungary, and Rumania followed on May 18.

At the insistence of the President, Chile had delayed action to abandon neutrality until the danger of adverse internal and external repercussions had been banished and every practical advantage had been derived. American naval victories in the Pacific had eliminated the danger of Japanese naval attacks upon the exposed Chilean coast. Pledges of U.S. lend-lease and economic aid had been obtained by Minister of Interior Raúl Morales Beltrami during his special mission to Washington in December. On his return trip to Santiago, Dr. Morales stopped at Buenos Aires for a long conference with the President and Foreign Minister of Argentina. Informing them in advance, in friendly terms, of Chile's decision to break with the Axis, he made possible the continuance of close Argentine-Chilean economic and political collaboration, despite the divergence of their foreign policies.

Soon after Morales returned to Chile on Jan. 5, 1943, the Chilean Senate in a secret session on January 19 approved a motion to end relations with the Axis powers by a vote of 30 to 10, with two members abstaining. The Government's decree carrying out this decision was issued the following day. In announcing this action over the radio, President Ríos explained that the move was "strictly diplomatic" and not directed against the peoples of the Axis countries, to whom Chile owed much of her progress. His circumspection largely overcame the opposition of powerful groups within Chile to the abandonment of neutrality. The bulk of the press and some of the leaders of the Rightist opposition rallied behind the new policy. Anti-Axis elements expressed their joyous approval in a huge demonstration held in the capital on January 27.

Prompt and effective action by the Minister of Interior minimized the danger of subversive activities by pro-Axis sympathizers among the 20,000 Germans, 12,000 Italians, and 700 Japanese living in Chile. More than 300 ringleaders of the German Nazi and Japanese colonies were forced to take up residence in small towns in isolated parts of Chile where they were unable to direct or engage in sabotage or espionage. Among them were the manager of the German Transocean news agency and the head of the Bayer Chemical Co. German centers in Santiago and other cities were raided and the principal Axis radio station and propaganda organs forced to suspend by one means or another. The Santiago police discovered four large bombs hidden in a telephone sub-station alongside of an army ordinance plant, but otherwise little difficulty was experienced in keeping pro-Axis sympathizers under control.

Soon after Chile broke off relations, an official Japanese spokesman in Tokyo declared that Chile was "fully responsible for the consequences." He warned that Chile could no longer count on "considerate treatment" of her shipping by the Axis and that she was "voluntarily renouncing her leading position in shipping on the Pacific Coast of

South America." These thinly veiled threats were followed by the arrest of the Chilean Minister in Tokyo. Chile retaliated promptly by locking up the Japanese Minister and 25 members of his staff in the Japanese Legation in Santiago and refusing to permit them to communicate with the outside world. This move was understood to have been effective in securing proper treatment for the Chilean envoy and his staff in Japan.

Relations with United States. Chile's break with the Axis was followed by the extension of further U.S. economic and military aid and by a period of close political collaboration. Two weeks after the break the Chilean Minister of Economy announced the conclusion of an agreement for the purchase and immediate shipment to Chile of two U.S. industrial plants made idle by the war production program. One was the copper plant of the General Cable Co., Pawtucket, R.I., suitable for the production of copper wire and plates, both badly needed for the furtherance of Chile's industrialization program. The other was a steel plant owned by the Worth Steel Co., Claymont, Del., with a capacity of 30,000 tons annually. Combined with Chile's existing steel mills, this plant was expected to supply the country's normal needs and permit a start on the long-discussed naval construction program.

A lend-lease agreement, under which the U.S. Government undertook to supply Chile with military equipment of unspecified value, was signed in Washington March 2. Soon afterward Gen. Oscar Escudero Otarola, commander in chief of the Chilean Army, went to the United States to arrange details of the equipment that Chile was to receive. The agreement under which the U.S. sent a military aviation mission to Chile in 1940 was extended for another three years through an exchange of notes between the State Department and the Chilean Ambassador in Washington on April 14.

Meanwhile Vice President Henry Wallace had received an extremely cordial welcome during his goodwill tour of Chile in late March and early April. During his visit the U.S. Embassy in Santiago announced March 29 that Chile had been granted priorities for the purchase of machine tools and machinery needed for the construction of hydroelectric plants on the Cachapoal and Laja rivers in southern Chile. While in Chile, Wallace visited the copper mining districts in the north, where the U.S. Defense Plant Corporation, a subsidiary of the Reconstruction Finance Corporation, had invested \$20,000,000 in plants for the expansion of copper production.

In June the U.S. Metals Reserve Co. agreed to an upward revision for one year of the contract price fixed in February, 1942, for the purchase of Chilean ores and concentrates of copper and gold, of manganese ore, and certain other strategic metals. There was no change in the price of metallic copper, comprising the bulk of the Chilean production. The U.S. Government agreed to facilitate shipments of new machinery for the Chilean mines and of coal for smelting low-grade copper ores, in return for Chile's promise to open up at least one additional copper smelter.

Vice President Wallace invited President Ríos to make the official visit to the United States which he canceled in 1942 following criticism of Chile's neutrality policy by Under-Secretary of State Sumner Welles (see 1943 YEAR BOOK). Ríos accepted the invitation for June, but political developments in Chile later led him to postpone the trip until 1944. However the Chilean Foreign

Minister, Dr. Joaquín Fernández y Fernández, visited Washington late in September for conferences with high U.S. officials and legislators on Chilean-United States problems.

Other Foreign Relations. Negotiations for closer economic cooperation between Chile and Argentina made further progress during 1943. In mid-April a ten-year contract was signed for the purchase by Argentina of large quantities of natural nitrates and 25 to 30 tons of iodine. Argentina agreed not to manufacture synthetic nitrates during the life of the agreement and not to reexport the Chilean nitrates or iodine.

Late in August the Chilean Foreign Minister stopped in Buenos Aires en route home from the inauguration of President Morínigo of Paraguay and signed important accords. They provided for joint Argentine-Chilean action to speed completion of the Salta-Antofagasta railway and new highways between the two countries and to reopen the Transandine Railway, blocked by a landslide several years before. The accords also eliminated customs duties on a number of articles exchanged by the two republics, and set up permanent commissions to study the feasibility of further progress toward a customs union.

A shadow was cast over Argentine-Chilean friendship later in the year as a result of the anti-democratic measures of the Ramírez dictatorship (see ARGENTINA under *History*). There were numerous protests from Chilean leaders and pro-democratic organizations, and demonstrations of solidarity with democratic forces in Argentina.

A marked coolness developed between the Bolivian and Chilean Governments due to the revival by Bolivian officials and newspapers of the longstanding demand for a Bolivian outlet on the Pacific. The Bolivians seized upon Vice President Wallace's visit to La Paz in April as an opportune time for raising the issue of a Pacific port. Bolivia's simultaneous declaration of war against the Axis on April 7 was viewed in Chile as an effort to enlist U.S. support for the Bolivian claim, and hence was received with little enthusiasm. The Chilean Government declined to consider a revision of its existing territorial boundaries. See BOLIVIA under *History*.

Internal Politics. Continued partisan bickering in Congress and quarreling within and among the political parties supporting the Ríos administration delayed the Government's legislative program for meeting the war-induced economic crisis and caused frequent reorganizations of the Cabinet. Meanwhile a Communist-sponsored movement for the unification of the Communist, Socialist, and Socialist-Labor parties into a single powerful labor party made substantial progress.

A split within the Socialist party led to the resignation of the three Socialist members of the Cabinet on February 3. They were replaced the following day by two Liberals and a Radical. Later another schism occurred within President Ríos's own Radical party. When a new session of Congress convened on May 21, the President in his annual message appealed for an end to intra-party quarrels. Nevertheless Minister of Interior Morales resigned on June 7 and the whole Cabinet followed suit in the customary gesture of solidarity. Morales, who was also a Radical, resigned because of "attacks from members of my own party." President Ríos immediately called off his impending trip to the United States.

Affirming his conviction that Morales had been the victim of partisan politics, Ríos accepted the Cabinet's resignation and replaced it with a min-

istry of nonparty experts, who agreed to perform their duties without regard to political considerations. The new Cabinet included Vice Admiral Julio Allard Pinto, commander in chief of the navy, as Minister of Interior, Major General Escudero, commander in chief of the army, as Minister of National Defense, and Joaquín Fernández y Fernández as Foreign Minister. President Ríos announced that party leaders would not be readmitted to the Cabinet until they had demonstrated their readiness to put the national welfare above party and personal interests.

This maneuver failed to force the Congressional leaders into line. In mid-June they declined to approve the emergency powers he had requested in order to curb widespread speculation and mounting inflation. A month later they killed in committee a constitutional amendment sponsored by the President, which would have transferred from Congress to the Chief Executive the power to initiate public works programs and create new government jobs. Ríos appointed Ramón Vergara Montero, former mayor of Santiago, as economic czar. But the latter's drastic efforts at price control and the elimination of speculation were not overly effective.

Another reorganization of the Cabinet was forced upon the President at the end of August as a result of the decision of the Socialist party convention to decline further participation in the Government. The Communists had all along refused participation in any government which they did not control. This left Ríos with only the support of the Radicals and minor Leftist groups. Since the President was opposed to governing on a largely one-party basis, he revised his Cabinet on August 31 to include both Radicals and members of the opposition Liberal party. Six of the nonparty experts in the former Cabinet were retained. The other seven portfolios were distributed among Radical and Liberal party leaders.

When the Congressional session expired on September 17 without adoption of the President's emergency economic program, he immediately called the members into special session and placed upon their shoulders the responsibility for finding an answer to the country's immediate economic problems. The general cost of living index (Base: March 1928 = 100) had risen from an average of 186 for 1939 to 242 in 1941 and 332.4 in December, 1942. Meanwhile, with the not inconsiderable powers at its disposal, the Government laid plans for the expansion of economic production. On October 25, it announced an 18-year program for the electrification of the whole country by harnessing the waterpower of the principal rivers. The development of low-cost hydroelectric power for the expansion of industry was to be carried out in three stages of six years each at a total cost of about \$100,000,000.

See ARGENTINA, BOLIVIA, PERU, under *History*; CHEMISTRY under *Foreign*; COPPER; JUVENILE DELINQUENCY; LABOR CONDITIONS; SOCIALISM; SPANISH-AMERICAN LITERATURES; TUNNELS; WORLD WAR.

RONALD STUART KAIN.

CHINA. A republic of eastern Asia. Provisional capital, Chungking. Nanking, the former capital, was captured by the Japanese in December, 1937, and Hankow, to which most of the Chinese Ministries were then transferred, fell in October, 1938.

Area and Population. Including the nominal dependencies of Sinkiang (Chinese Turkestan), Outer Mongolia (see MONGOLIA), and Tibet

(q.v.), over which the Central Government exercised little or no actual control, and the former Chinese Provinces incorporated in the Japanese protectorate of Manchukuo (q.v.), China has an area estimated by the Ministry of the Interior in 1937 at 7,226,365 square miles, of which 2,279,134 square miles are included in China Proper, with a total population of 466,785,856. For the estimated area and population of the provinces and dependencies, see 1942 YEAR BOOK, p. 118. A 1940 estimate placed the total population at 450,000,000.

According to a 1943 estimate, the actual area under Japan's nominal control (excluding Manchuria) was roughly 440,000 square miles with a population of 200,000,000. The National Government in Chungking remained in control of nearly 4,000,000 square miles with a population of some 260,000,000. To escape Japanese rule, about 40,000,000 Chinese migrated from the densely populated coastal plains to the mountains of Szechwan, Yunnan and the northwest between 1937 and 1943. There were estimated to be 7,828,888 Chinese residing abroad in 1936. The Japanese civilian population of China on Jan. 1, 1940, was 345,700, an increase of 300 per cent since July, 1937. As of July 17, 1942, Japanese estimates placed the Japanese civilian population of Central China at 145,900, including more than 100,000 in Shanghai, 13,000 in Nanking, 11,000 in Hankow, and 2,800 in Hangchow.

The estimated population of Shanghai and its environs in 1936 was 3,489,998 including 1,450,685 persons in the Foreign Settlements; Peiping, capital of China until 1928, 1,556,364; Tientsin, 1,292,025; Nanking, 1,019,948; Tsingtao, 514,769. Estimated populations of the other chief cities in 1931 were: Canton, 861,024; Hankow (including Wuchang and Hanyang), 777,993; Chungking, 635,000; Wenchow, 631,276; Changsha, 606,972; Hangchow, 606,930; Weihaiwei, 390,337; Foochow, 322,725; Soochow, 260,000; Amoy, 234,159; Ningpo, 218,774; Wanhhsien, 201,937; Chinkiang, 199,776.

Education. Between 25 and 50 per cent of the population were estimated to be literate in 1937, compared with an estimated 15 per cent in 1912. By August, 1940, when the five-year program was launched, the number of illiterate adults between 15 and 45 to receive schooling was approximately 140,000,000 and of children between 6 and 15 the number was 53,101,531. At the outbreak of the Chino-Japanese war in 1937 there were 294,141 primary schools and kindergartens with 16,629,644 pupils, 3,264 middle schools with 571,820 pupils, and 108 institutions of higher learning with 41,922 students. By 1939 the Japanese invasion was estimated to have closed 129,771 primary schools and kindergartens with an enrollment of 6,483,481 pupils, 1,296 middle schools with 250,453 pupils, and institutions of higher learning with 20,000 students. The Peiping Union Medical College, largest medical center in the Orient, was closed by the Japanese on Feb. 1, 1942. Up to October, 1939, no less than 39 of the closed universities had reopened in the western unoccupied provinces, where numerous secondary schools were likewise established. Enrollment in 115 universities in West China was estimated at over 45,000 in 1941-42; in middle schools, more than 600,000.

Religion. With the exception of Christians and Mohammedans, most Chinese practise and profess all three indigenous or adopted religions—Confucianism, Buddhism, and Taoism. The Mohammedans are estimated at over 48,000,000. In 1934 there were 2,623,560 native Roman Catholics and

123 Catholic missions, with a staff of 16,241. The Protestant churches, with 1,130 mission stations and 488,539 communicants in 1932, had 19 colleges, 267 middle schools, and 37,714 students in 1934. The number of Christian missionaries in China declined from nearly 6,000 in 1937 to about 3,600 on June 30, 1941. Of those remaining, many were expelled or imprisoned after Japan attacked the Anglo-American and other powers.

Production. Previous to the outbreak of Chino-Japanese hostilities in 1937, China was the world's leading producer of rice, soybeans, tea, kaoliang, sweet potatoes, millet, and vegetable oils; it ranked second in the output of raw silk and wheat; third in cotton, and was an important producer of corn, tobacco, fruits and vegetables, and cane sugar, as well as the leading exporter of eggs and tung oil. Estimated production of rough rice in 1940-41 was 2,440,000,000 bu. (34,277,000 metric tons in Free China in 1942); wheat in 1941, 19,440,000 metric tons (preliminary); cotton in 1941, 2,406,000 bales (of 478 lb.) including Manchuria; flue-cured tobacco in 1941, 85,000,000 lb.; rape-seed in 1940, 2,507,000 metric tons; raw silk in 1940, 107,430 picul bales (of 132¼ lb.). Tea production is estimated at 300,000 to 500,000 metric tons annually; tung oil, 140,000 tons. The wool and mohair clip for China and Manchukuo was about 55,000 metric tons in 1940.

The estimated mineral output of all China, excluding Manchukuo, in 1940 was (in metric tons except as stated): Coal, 17,828,711; antimony, 7,418; tin ingots and slabs, 23,361; tungsten ore, 11,580; white alum, 21,000; arsenic, 1,200; coke, 50,430; copper ore, 1,100; gold, 377,000 fine oz.; gypsum, 75,000; iron ore, 551,000; pig iron, 107,000; lead ore, 1,800; crude petroleum, 440,000 U.S. gal.; potash, 3,317; quicksilver, 118; rock salt, 926,716; refined salt, 18,837. The mineral production of Free China in 1941 was reported as follows (in tons): Tungsten, 11,500; antimony, 7,600; fine tin, 7,000; mercury, 120; coal, 6,000,000. The 1941 output of petroleum from the new Kansu fields was 3,630,000 gal.; of foundry iron, 10,000 tons.

The war disrupted China's rapidly expanding manufacturing industry (see *YEAR BOOK*, 1937, p. 152), but there followed a considerable transfer of plants to the free provinces in the west. At the beginning of 1943 there were 1,915 private factories in West China employing 80 or more workers each, and using mechanized power for production. According to official Chinese reports, there were 87 metallurgical works, 376 units of machine works, 44 electrical plants, 380 chemical works, 273 textile mills, 3 cement plants, 133 alcohol factories, 17 paper mills, 42 oil refineries, 1,629 coal mining units, and 122 iron mining units.

Trade and Finance. See 1943 *YEAR BOOK* for latest available data.

Transportation. All railways in occupied China are operated by two semi-official Japanese companies, the North China Communications Co. (operating 4,089 miles of line on Jan. 1, 1941) and the Central China Communications Co. (operating 1,230 miles of line in central and south China on Jan. 1, 1940). There were reported to be 2,285 miles of railway line in Free China as of Aug. 1, 1939, but many of these lines were torn up to prevent Japanese advances or closed down for other reasons. The principal railways reported to be in operation in Free China in 1943 were Hengyang-Liuchow-Kweiyang, Kunming-Suanwei, Kunming-Mengtze-Shihping, Loyang-Tienshui, Hsienyang-Tungkuang, and Chungking-Neikiang. Other important lines were reported under construction.

Highways in all China extended over 61,430 miles in 1940. Much new construction took place in both Free and occupied zones during 1940-43. The ferry command of the U.S. Army Air Forces accounted for the bulk of the air traffic to and from Free China during 1943, its transport planes operating from both India and from Alaska via Soviet Siberia. The China National Aviation Corp., a Chinese-American enterprise, maintained air transport services between Chungking and Calcutta. There was a Chungking-Moscow air line, operated jointly by the Chinese and Soviet Governments. Japanese air transport routes in China on Jan. 1, 1941, extended 5,154 miles, connecting the chief cities of the occupied areas. During 1940, 91,891 vessels of 25,675,594 tons entered and cleared Chinese ports in the overseas trade.

Government. The Organic Law of Oct. 4, 1928, revised on Dec. 29, 1931, and Dec. 27, 1932, vested the supreme governing powers of the Chinese Nationalist Government in the National Congress of the Kuomintang (Nationalist party), acting through the Central Executive Committee, the Central Supervisory Committee, and the Central Political Council. Executive control, however, centered mainly in the hands of Gen. Chiang Kai-shek, commander-in-chief of the Nationalist armies. After the outbreak of hostilities with Japan in 1937, a Supreme National Defense Council, headed by Chiang Kai-shek, assumed direction of all political and military affairs. It included the heads of all party, political and military organs together with other members nominated by the chairman and approved by the Council. See *HISTORY*.

The chairman of the State Council and nominal head of the government in 1942 was Lin Sen. The chairmen of the five yuan (committees) of the government were: Executive, Gen. Chiang Kai-shek, assisted by Dr. H. H. Kung as vice-chairman; Legislative, Sun Fo; Judicial, Chu Cheng; Examination, Tai Chi-tao; Control, Yu Yu-jen. Under the chairman of the Executive Yuan were nine ministries, headed as follows: Interior, Chow Chung-yu; Foreign Affairs, T. V. Soong; Military Affairs, Gen. Ho Ying-chin; Finance, Dr. H. H. Kung; National Economy, Dr. Wang Wen-hao; Communications, Tseng Yang-fu; Education, Chen Li-fu; Agriculture and Forestry, Adm. Shen Hung-lai; Social Affairs, Ku Cheng-kan; Information, Chang Tao-fan. Attached to the Executive Yuan are three subordinate Commissions, supervising Mongolian and Tibetan Affairs, Overseas Chinese Affairs, and Famine Relief. See *HISTORY*.

On Mar. 22, 1940, the Japanese established a puppet government at Nanking headed by Wang Ching-wei as Acting President and President of the Executive Yuan. Other puppet governments were established at Peiping and Canton, as well as in Manchuria and Inner Mongolia (see *MANCHUKUO, MONGOLIA*).

The Japanese invasion of China proper began July 7, 1937, without formal declaration of war. After the Japanese attack on Pearl Harbor, the Chinese Government declared a state of war with Japan, Italy, and Germany as from Dec. 9, 1941.

HISTORY

Military Developments. China's military situation, despite another Japanese drive into the "rice bowl" area of the central Yangtze Valley provinces and also into western Yunnan on the Burma frontier, did not change materially in 1943. The renewed fighting in Central China which began in November and continued practically to the end of the year represented Japan's fourth attempt to capture

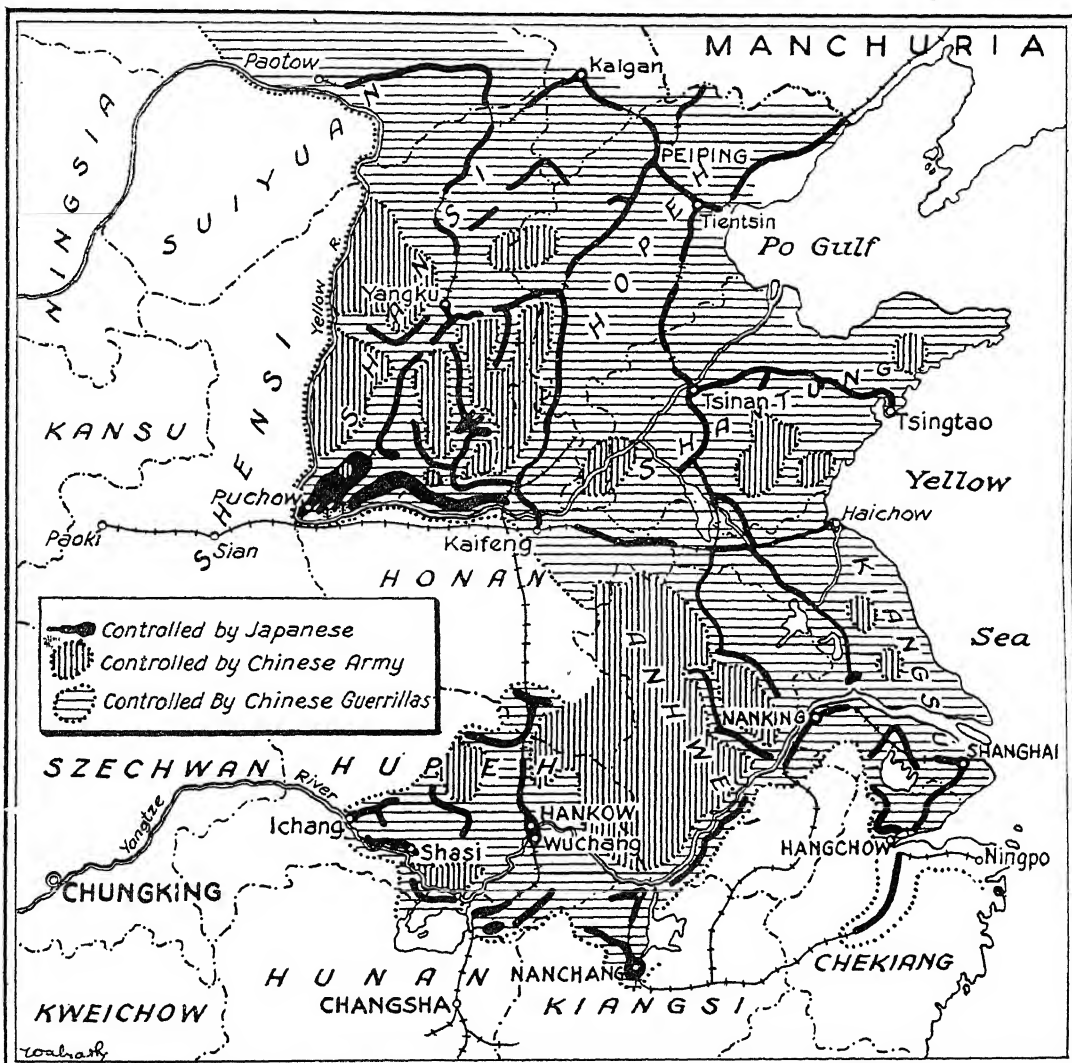
the strategic city of Changsha, located on the Hankow-Canton Railway to the southwest of Hankow. The Japanese succeeded in occupying the walled city of Changteh, northeast of Changsha, but were forced to withdraw. The fighting at Changteh was described as the most serious that had taken place since the sanguinary battle for Shanghai in 1937. Possession of strategically-located Changsha with its airfield would place the Japanese within striking distance of Chungking, the capital of Free China and at the same time probably would enable Japan to open the railway to Canton, both of which have constituted major Japanese objectives since the beginning of the invasion of China proper in 1937.

China's repeated charge that the Japanese were using poison gas in the fighting in Central China received confirmation, from the standpoint of fear and sneeze gas, in statements of Japanese prisoners taken captive in the fighting in the "rice bowl" district. The prisoners said that Japanese units in Central China are equipped to use deadly blister

and suffocating gas but denied they had ever witnessed the use of these gasses. Both President Roosevelt and Prime Minister Churchill had repeatedly warned the Japanese and Germans that the Allies would retaliate in kind and full measure against the use of gas by the enemy.

Japan and the Chinese Railways. Japan's inability to obtain military control of the Chinese railways passing through Central China in a north-south direction, connecting Peiping and Hankow, Hankow and Canton, and Shanghai and Canton constituted a serious if not irreparable blow to Japanese military strategy. The Japanese Army counted on the control of China's few trunk-line railways in order to facilitate troop movements and military supplies in a generally roadless country, and in addition they hoped that railway revenues would reimburse them for the cost of their China adventure.

Aside from the railways of Manchuria, the Japanese only obtained control of the 800-mile line connecting Peiping-Tientsin and Shanghai but even



Courtesy of The New York Times

CHINA AFTER SIX YEARS OF WAR

The map, prepared in July, 1943, from information supplied by the Chinese Military Mission to the United States, shows the limited areas in North and Central China then under effective Japanese control.

this line, lying wholly within Japanese-occupied territory, was made uncertain and unprofitable due to the depredations of Chinese guerrillas.

As a result the Japanese had to depend on river and ocean-going transport which became a chief target for the American and Chinese air forces operating from bases in south-central and southwest China. Bombing raids by the U.S. 14th Air Force and its Chinese-American wing on Japanese lines of communication, supply bases, and shipping at Hankow and along the Yangtze, plus the actual strafing of Japanese troop concentrations, were credited with a large measure of responsibility for the latest Japanese defeats in Central China.

Targets for Chinese-American Fliers. Reports from the Chinese front in the last quarter of the year indicated growing activity on the part of the American and Chinese-American air forces, extending not only to Japanese shipping installations along the coast from Shanghai to Canton but even to Formosa, presaging eventual bombings of Japan proper. Japanese shipping and military installations at practically every important city on the Yangtze from Ichang to Shanghai served as targets for American and Chinese fliers. The only important city which had escaped bombing was Shanghai and this was due to Japan's action in locating detention camps containing large numbers of American, British, and other United Nations war prisoners in close proximity to Japanese military and shipping installations.

Japanese shipping and dockyards at Hong Kong particularly provided a special target for American and Chinese airmen, especially the extensive docks at Kowloon and Taikoo which the Japanese seized from the British. The large oil installations formerly owned by the Anglo-American oil companies, which the Japanese also took over following the occupation of the British Colony, served as special targets for the American and Chinese airmen. In one air raid on Tungting Lake in Central China the American and Chinese airmen strafed and destroyed some 200 small Japanese landing boats, each carrying from two to a half-dozen Japanese soldiers. The destruction of Japanese shipping on the Yangtze and along the coast was so extensive that the Japanese experienced severe difficulties in supplying food and fuel to the inhabitants of cities within areas occupied by the Japanese Army.

The Japanese on August 23 attempted an air-raid on Chungking, their first in nearly two years, but little damage resulted. The raid was in retaliation for an American raid on Hankow which had resulted in 39 Japanese planes being shot down.

The importance of the China front from the standpoint of American and Allied strategy was emphasized by Adm. Ernest J. King, Commander in Chief of the U.S. Fleet, in an interview with the *Associated Press* in August. He said that China's position in respect to Japan was analogous to that held by Russia in respect to Germany. "The key to final victory over Japan lies in China," he declared.

American Preparations. American military activity against Japan on the Asiatic Continent during the year was concerned largely with the up-building of the U.S. 14th Air Force in China, plus the training of a Chinese air force and the development of the Tenth U.S. Air Force in India, plus the training and equipping of a large Chinese land force for service in ejecting the Japanese from Burma in order that land communications between northeastern India and China may be reestablished.

In view of the importance of China in Allied global strategy, it was realized that Japan would

concentrate her best forces on that front. The struggle was mainly concerned, from the American standpoint, in developing and fortifying air bases south of the Yangtze to permit easy bombing of Japan. The magnitude of the problem was indicated by the fact that all supplies, including gasoline and repair equipment, had to be flown into China over the Himalayas by transport plane. This monumental work was done by U.S. Army transport planes and the planes of the China National Aviation Corporation, an American-Chinese concern.

The commanders of the two major American enterprises on the Continent were Maj. Gen. Claire L. Chennault of the 14th Air Force in China, and Lieut. Gen. Joseph W. Stilwell, commander of U.S. land forces in China, Burma and India, who is attached to the headquarters of Generalissimo Chiang Kai-shek on the northern India front.

According to a report in August, General Chennault's forces in the first 13 months of his command shot down 306 Japanese planes against a loss of 39 on the American side. The Pursuit Group, which took over from the American Volunteer Group (Flying Tigers) in March, 1943, had a record of 252 Japanese planes downed to 37 American, a ratio of 7 to 1. In addition to this, 139 Jap planes were destroyed on the ground against 5 American while the number of Jap planes probably downed had reached 66.

New Chinese Army for Burma Front. Land fighting on the Burma front between Chinese and Japanese forces was largely confined to the west bank of the Salween River which roughly parallels the border between China's Yunnan province and British Burma. The fighting took place in the mountainous area north of the point where the Burma Road crosses the border leading from Lashio in Burma to Lungling and Paoshan on the Chinese side. The Chinese forces were under the command of Gen. Chen Cheng, who defeated the Japanese on the Middle Yangtze in the spring. Japanese forces, which tried to dislodge the Chinese from the west bank of the Salween, numbered between 30,000 and 50,000. Fighting in this area took place amidst almost indescribable difficulties from the standpoint of terrain for the mountains are high and steep and separated by deep gorges. The fighting in October and November was along a 105-mile front in the vicinity of Lushui and Luku, northeast of Myitkyina, and according to reports from Chungking the Chinese were able to prevent the Japanese from crossing the Salween.

Attention was centered on the work of General Stilwell in the creation of a new Chinese army in northern India, the nucleus consisting of Chinese troops evacuated from Burma when British resistance collapsed in 1942. The British also contributed toward the project, and a large number of specially trained officers and noncommissioned officers of the U.S. Army were used to train the Chinese forces.

The Ledo Road. Aside from the training of personnel, the Americans and Chinese with the cooperation of the British authorities in India tackled one of the world's most difficult construction jobs, the building of a road from northern India to southwestern China to replace the Burma Road which the Japanese seized when they invaded northern Burma in 1942.

The starting point of the Ledo Road from the Indian end was Sadiya, Assam, the head of railway communication in northeastern India. The road was being driven through some of the world's densest forests and across successive ranges of

mountains from 2,000 to 6,000 feet in height. General Stilwell's Chinese troops had the job of guarding the road. By mid-November, they had advanced into the Chindwin Valley in northern Burma, about 100 miles beyond the Assam border and had contacted Japanese advance units.

Japan Makes Peace Overtures. Dr. T. V. Soong, Chinese Foreign Minister, reported that the Japanese made several peace overtures to China in 1943. In August Japan offered to return to the status quo as of July 7, 1937, when the Japanese first opened fire at Marco Polo Bridge near Peiping, and to withdraw their troops from all parts of China except Manchuria, but demanded the retention of economic rights in North China. The Japanese also wanted China to "go in with them," otherwise join Japan in an "Asia for the Asiatics" policy. Dr. Soong declared that there was no conscious political group in China which would respond to Japan's feelers and that while China wanted to recover all Chinese territory, the Chinese "had no designs on a single foot of foreign soil."

Further evidence that there was another "behind-the-scenes" war, distinct from the clashes of the armed forces, going on in Asia between China and Japan was indicated in reports from other sources. Missionaries who had been stationed in territories nominally under the control of the Wang Ching-wei Government at Nanking reported that there was a definite tendency on the part of the puppet troops to "go over to the Chungking side." Americans repatriated from Shanghai stated that high officials of the Wang Ching-wei Government had begun to speculate on a place to go "in the event of Japan's defeat." It was stated there had been three attempts on Wang's life and that there was considerable talk in Japanese army circles about replacing him with someone in whom the Chinese had more confidence.

China at Low Economic Ebb. Economically and financially, China probably had reached its lowest ebb since the establishment of the Republic in 1911. The situation was a direct result of the prolonged war with consequent Japanese occupation of the chief industrialized and agriculturally developed sections of the country.

Dr. T. F. Tsiang, member of the Executive Yuan and Chinese representative on the United Nations Rehabilitation Administration, reported on November 17 that 84,000,000 Chinese were in need of relief, chiefly food. Dr. Tsiang stated that of China's estimated population, 200,000,000 lived under Japanese occupation, while 40,000,000 additional should be classed as "displaced." Of the residents of Japanese-occupied territory, 30 per cent or 60,000,000 were in need of relief, while 60 per cent of those displaced, or 24,000,000, needed help, the total being 84,000,000.

A report by the United Press from Chungking in November said that a combination of floods on the Yellow River and Japanese aggression had complicated China's food problem, causing losses of human lives to be estimated in millions. In other sections the disruption of the country's economy resulting from Japanese aggression, particularly in Kwangtung, Chekiang, Shantung, and Anhwei, caused further distress affecting millions. The Japanese rounded up thousands of the refugees and shipped them to Manchuria to do slave labor.

The Central Government at Chungking assisted several thousands of destitute by sending them in Government trucks to the frontier province of Sinking. The Government appropriated more than \$5,000,000 to purchase rice for the starving in

Honan alone. In addition large sums were remitted to China from the United China Relief organizations in the United States.

Great Currency Increase. *The New York Times* published a report on economic conditions in China from its correspondent in Chungking stating that the volume of currency had increased 12 times since the beginning of the war and that the increased volume of currency combined with the Government's mounting need for war materials and services and acute shortage of goods had resulted in inflation. In January the Government attempted to halt price increases by establishing price ceilings. Prices had been increasing at the rate of 10 per cent a month. The Government attempted to relieve distress among its employes by selling them rice, coal, salt, cloth, and vegetable oils at reduced prices and by providing monthly living allowances in cash and rice. The desperate shortage of merchandise caused by the Japanese blockade was relieved somewhat by a brisk smuggling trade which has sprung up between areas controlled by Chungking and Japanese-occupied territory.

Anti-Inflation Measures. Dr. H. H. Kung, Finance Minister and Governor of the Central Bank of China throughout the period of China's war with Japan, reported on November 1 that the following measures had been adopted to overcome the peril of inflation: 1. Expansion of revenues. 2. Intensification of retrenchment. 3. Promotion and stimulation of savings (compulsory as well as voluntary) by offering a variety of attractive securities some redeemable in either national or foreign currency. 4. Restrictions on the extension of credit by both Government and private financial institutions so as to clamp down on profiteering and at the same time to improve credit facilities for assisting the increased production of wartime necessities. 5. Coordination and improvement of the machinery of price control. 6. Regulation of the production and marketing of essentials such as foodstuffs, iron and steel, cement, oil and paper. 7. Carrying out of a national campaign to foster thrift and economy in consumption. 8. Acceleration of production both in agriculture and industry.

Postwar Program. The National Resources Commission, of the Ministry of Economic Affairs, affiliated with the China Defense Commission, outlined a postwar development program designed to raise the general standard of living and strengthen national defense. The central objective was to prevent China from again becoming a victim of aggression.

A comprehensive report, the first to be published in America, of the new industrialization program, with a map showing China's seven industrial areas as outlined by the National Resources Commission, appeared in *The Wall Street Journal*, New York, on November 26 and 27.

That China's N.R.C. (National Resources Commission) is a practical working agency was indicated in its 1942 report which showed the operation of 96 industrial "units," including 11 metallurgical, 4 machinery, 4 chemical equipment, 18 chemical, 6 tungsten, antimony, tin, and mercury; 31 coal, iron, copper, lead, and zinc; 18 electric power from coal, and 4 hydro-electric enterprises. The report stated that Chungking's five-year heavy industry plan covered: 1. An increase in output of coal, iron and steel. 2. Production of such machinery as locomotives, autos, machine tools, steamships, aircraft, farm tractors, and textile machinery. 3. Output of acids, soda, fertilizer, refined oil, rubber, and cement. 4. Factory output of electrical appliances coincident with construction of power-

producing facilities. 5. Export of such abundant minerals as tungsten, antimony, tin, and mercury, to secure foreign exchange to buy goods abroad.

Government Control. Considerable speculation was aroused in foreign financial and industrial circles by reports from Chungking indicating the intention of the Government to engage in the operation of most enterprises which fell into the classification of "heavy industries" and were closely connected with national defense. According to Dr. Wong Wen-hao, Minister of Economic Affairs, the Government intended to reserve to itself the operation of all defense industries, including public utilities and fuel.

New Finance on China's Terms. Dr. T. V. Soong, Foreign Minister, in an interview in London on August 4 stated that foreign capital would be sought for the financing of China's first modern industries, but specified that foreign capital in future "must enter China on China's terms." Referring to Manchuria in particular, Dr. Soong stated that the Manchurian railways in future "would be controlled by China." It was thought that he had in mind reports that the Soviet Union might demand resumption of ownership of the Chinese Eastern Railway across North Manchuria which Russia sold to the Japanese after Japan's conquest of Manchuria in 1931. China strongly protested against the sale on the grounds that China possessed a half interest in the railway and that its sale to Japan was prejudicial to China's national interests.

Generalissimo Becomes President. The outstanding political development of the year in West China was the election of Generalissimo Chiang Kai-shek to the Presidency of the Republic. Chiang took the oath of office on October 10, the 32nd anniversary of the founding of the Republic. In an address broadcast throughout the country and abroad, he declared that China's policy was to achieve the early establishment of constitutional government. He pledged himself to endeavor to recover all of China's lost territories and to comply with the teachings of Dr. Sun Yat-sen, the father of the Chinese Revolution. General Chiang was elected to the office of President by the Central Executive Committee, the most powerful group in the Kuomintang Party. The term of office is three years. President Chiang Kai-shek retained his position as commander-in-chief of China's land, naval, and air forces and in addition maintained control of the Party organization through his presidency of the Central Executive Committee. The office of President had been largely decorative but under General Chiang it was expected to become a powerful post in the United Nations group.

Shortly before his election Chiang was awarded the new American Order of the Legion of Merit in the degree of Chief Commander. He was the first Chinese to receive this honor, which only one officer in the U.S. Army, Gen. George C. Marshall, Chief of Staff, held in similar rank. Chiang's election as President followed the death on August 1 of President Lin Sen, 79 years of age, who had held the office of chief executive since 1932. In his final testament President Lin Sen called upon all Chinese to follow the leadership of Generalissimo Chiang Kai-shek.

Constitutional Period. The Central Executive Committee at the same meeting voted to call a National People's Congress within one year after the end of the war for the purpose of adopting a permanent constitution.

According to Chiang's address at the opening of the plenary session of the Central Executive Committee on September 6, the establishment of

constitutional government would mark the handing over of the government to the people, following which the Kuomintang "should take its place on equal footing with other ordinary parties and common citizens enjoying equal privileges and rights, fulfilling equal obligations and receiving equal treatment from the state under the principles of freedom of assembly, organization, speech, and publication under the law."

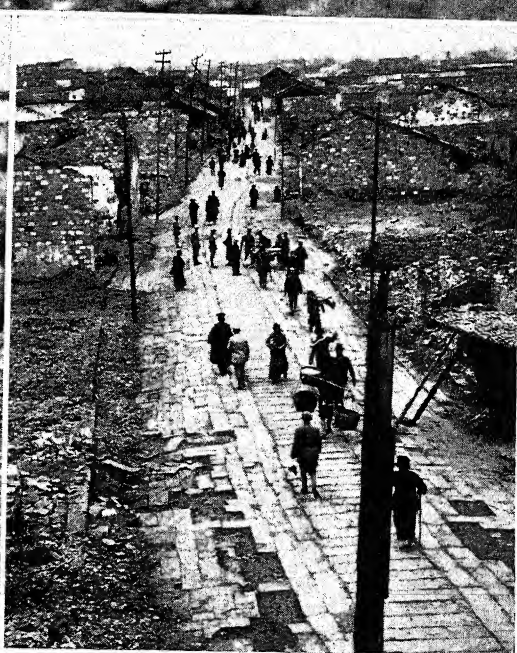
China, from a constitutional standpoint, was officially in the "Period of Political Tutelage," which followed the "Period of Military Consolidation" when the Kuomintang or Nationalist Party established itself as the government of the country. The period of tutelage was to prepare the people for the final stage of constitutional government. The Kuomintang issued a call for a National Assembly to adopt a constitution in 1937 but the outbreak of war with Japan prevented the convening of the assembly. In 1938 the Kuomintang organized the People's Political Council which served as an advisory, supervisory, semi-legislative popular assembly in which minority groups were, in theory at least, represented, including the Communists, State Socialists, and the National Youths.

The Executive Yuan enacted legislation providing for the establishment of popular assemblies in all districts where the new *hsien*, or county system, was scheduled for enforcement in 1944. The bill provided that all magistrates and officers should convene meetings of villages, districts, and counties so that organs of public opinion might be established within the prescribed period. It was also specified that municipal authorities must assume responsibility for reorganization of local police, construction of roads, enforcement of mass education and improvement of public health.

The Chinese Communists. Prior to his election as President, Generalissimo Chiang, as President of the Kuomintang Party, instructed the Central Executive Committee "to maintain a policy of leniency and forbearance toward the Chinese Communists." He said that the problem of the Chinese Communists was a "purely political one and must be solved by political means." Chiang's statement attracted wide attention due to reports of clashes between Government troops and armed Communist bands in Shantung and elsewhere in North and Northwest China.

Spokesmen for the Chinese Communists alleged that the Central Government had maintained a strong cordon of troops about the Communist-controlled district of Northern Shensi province, which, according to their allegations, "might have better been used in repelling Japanese aggression." Spokesmen of the Government, however, charged lack of cooperation on the part of the Chinese Reds, who had maintained an independent existence within a closely guarded area of Northern Shensi, Shansi, and Suiyuan, and had refused to permit their well-trained and equipped Fourth and Eighth Armies to be incorporated into the national forces. The National Government stated its troops were stationed in southern Shensi to prevent the Japanese from crossing the Yellow River and invading Kansu and Sinkiang provinces. Since the beginning of the war against Japan the Chinese Communists had concentrated largely on guerrilla activities in the northern provinces, leaving the matter of positional warfare against the Japanese in Central China and on the Burma front to the Central Government.

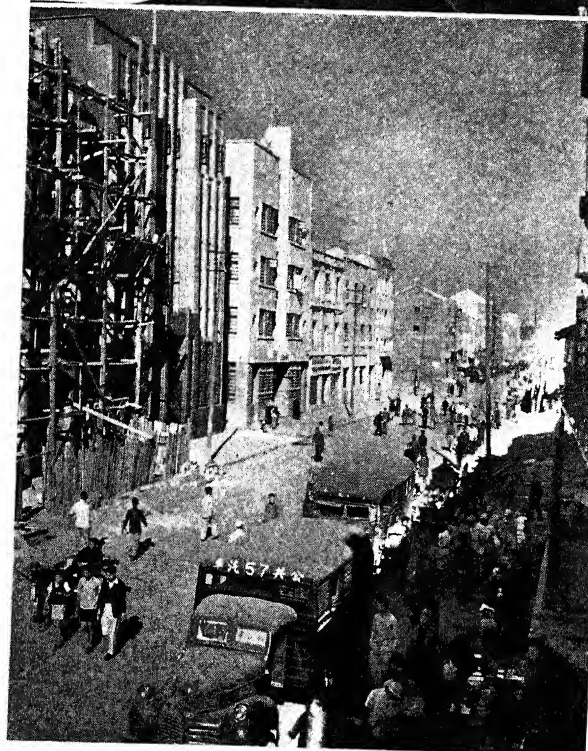
Government spokesmen professed anxiety that the Chinese Communists, being under Russian influence, might set up a separate independent gov-



ONS Photos

THE RECAPTURE OF CHANGTEH

General Huo Chin-pan (above) directs the 11th Division during the battle for the city. At lower left, Chinese troops use a demolished wall as a barricade. At lower right, refugees return to ruined homes after Japs evacuate the city.



THE WESTERN WORLD LEARNS MORE ABOUT CHINA

Above: Madame Chiang Kai-shek addresses the U.S. House of Representatives in such flawless English and sincerity of statement as to endear her to all Americans. (Press Association, Inc.)
 Left: Street scene in Kunming, showing reconstruction with modern buildings of bombed areas. Right: The Government brings relief funds to the people of Changteh. (CNS Photos)

ernment in the northwestern territories and ask for Russian military protection somewhat as occurred in Outer Mongolia where a Russian-instigated "Mongolian People's Government" in June, 1921, made a treaty with the Soviet Union providing for Soviet military assistance. Mongolia has in the meantime become to all intents and purposes a part of the Soviet Union.

That Russian interest in the Chinese Communists continued, despite the dissolution of the Third International, was indicated by a statement by Vladimir Rogoff, Far Eastern representative of the official Soviet Tass News Agency charging that "capitulators and defeatists" in the Kuomintang were involved in a "vicious intrigue to crack the Kuomintang's united front with the Communists." Rogoff declared that the Red Fourth and Eighth Armies "comprise the most advanced, firmest and most self-sacrificing people of China." He charged that the Kuomintang had sent large forces to the Mongolian frontier where the Red armies were operating for the purpose of disarming them and "wiping out the Communist Party." Concluding, the Soviet spokesman alleged that "civil war may be near . . . if fratricidal war results it will lead to fatal consequences for the Chinese war of liberation . . . it will be tantamount to aiding the Jap imperialists." Rogoff also asserted that highly placed individuals at Chungking were "engaging in speculation and self-enrichment . . . rather than investing capital in war industry."

Chungking made no direct reply to the Soviet allegation but a member of the Central Executive Committee published an article demanding that the Russians "open a second front in Asia by declaring war on Japan." The writer, Chow Lu, declared that China "was looking forward to Russia's taking a more resolute stand than the dissolution of the Comintern . . . China wants a Russian declaration of war against Japan which would make the grand united front of the Allies complete."

Russia Evacuates Sinkiang. There was a significant development in China's far western province of Sinkiang late in 1942 and early in 1943 which aroused international attention. It was the sudden withdrawal, without explanation, of a considerable Russian force which had been in practical occupation of China's most western province for nearly a decade. Soviet diplomatic quarters in Chungking stated, unofficially, that the Soviet forces had been stationed in Sinkiang "for the purpose of preventing an invasion of that territory by the Japanese." The Russians alleged that Japanese intrigue had been strong in the territory at the time of Japan's occupation of Manchuria and northern China in 1931-32, hence it had been necessary for the Soviet Union to take "independent self-protective action" by stationing a strong force in China's most western territory beginning in 1934. The Russians also engaged in extensive trading and industrial activities including the drilling of oil wells in a potentially rich field in the Kashgar district. The Russians brought with them doctors, engineers, advisors, blooded horses, movies, music, books, a police system, and advanced a loan of 5,000,000 rubles to the Sinkiang provincial government. (See *Life Magazine*, Dec. 6 and 13, 1943.) Russian penetration and domination of the area was so complete that travelers had to obtain Soviet permits to visit the territory and such permits were only granted in exceptional cases. On a few occasions when Americans and other neutrals visited Sinkiang they were given reports from Chinese sources telling of strong Soviet intrigue tending in the direction of ultimate annexation.

The action of the Cairo Conference in promising to restore Manchuria and Formosa to China and to reestablish the independence of Korea was expected to lead ultimately to a settlement of outstanding issues between China and Russia.

Improved International Status. China's spiritual distress resulting from seven years of warfare and the occupation by the enemy of her most productive territory and leading cities was alleviated somewhat by the action of her allies in taking steps to restore her administrative and territorial status as an independent nation.

These steps involved two important developments: first, the relinquishment of extraterritorial rights in China by the United States and Great Britain on May 20, and second, the adoption by the U.S. Congress of a bill repealing the 60-year old Chinese exclusion laws. The bill was signed by President Roosevelt on December 17 following his return from the Cairo and Tehran conferences. The latter action made Chinese living in the United States eligible for citizenship through the process of naturalization and in addition removed immigration barriers to permit 105 Chinese to enter the United States annually on a quota basis, similar to citizens of other countries.

The President declared when he signed the bill that it represented a manifestation on the part of the American people of their affection and regard, heightened obviously by China's long-sustained resistance to Japanese aggression. The President expressed the hope that the removal of the unfortunate barrier between the Allies would result in the war effort in the Far East "being carried on with greater vigor and a larger understanding of our common cause."

From a practical standpoint the Congressional action helped to silence distorted Japanese propaganda among oriental peoples to the effect that the causes for which the United Nations fought were not applicable in the every-day relations of East and West. See **THAILAND** under *History*.

Early in October China agreed to hand over jurisdiction in criminal offenses committed by members of American armed forces in China to the "service court and the military and naval authorities of the United States." The action was taken by China as a war measure due to the presence within the country of an increasing number of American armed forces.

Among the outstanding developments in the relations of China and the United States in 1943 was the American visit of Madame Chiang Kai-shek, wife of China's Generalissimo and a member of the Soong family which had played an important part in the politics and government of China since the revolution in 1911. Madame Chiang spent several months in the United States and delivered a number of notable addresses which contributed greatly to a better understanding on the part of Americans with regard to China's problems incidental to the war. Madame Chiang was given one of the most enthusiastic welcomes ever accorded a foreign visitor by the American people. Among her many addresses delivered before audiences in various parts of the country, the most notable were before members of Congress at the Capitol in Washington and at Madison Square Garden in New York, the latter being attended by more than 20,000 people.

See **AERONAUTICS; CANADA, COLOMBIA, GREAT BRITAIN, INDIA, JAPAN, TIBET, and U.S.S.R. under History; ANTIMONY; LABOR CONDITIONS; LEND-LEASE PROGRAM; POSTWAR PLANNING; REFUGEES; ROADS AND STREETS; UNITED NATIONS; WATER-**

WAYS; WORLD WAR. For the visit of Madame Chiang to the United States, see UNITED STATES; also, FASHION EVENTS; RADIO PROGRAMS.

JOHN B. POWELL.

CHINESE EXCLUSION ACT, Repeal of. See CHINA and NICARAGUA, under *History*; IMMIGRATION.

CHLORINE. See CHEMISTRY; CHEMICAL INDUSTRY.

CHOSEN. See KOREA.

CHRIST, Churches of or Disciples of (Christian Churches). See DISCIPLES OF CHRIST.

CHRISTIAN SCIENCE. A system of metaphysical or spiritual healing, discovered by Mrs. Mary Baker Eddy in 1866 and set forth in her textbook of the Movement, *Science and Health with Key to the Scriptures*, first published in 1875. The first church was established by Mrs. Eddy in Boston in 1879. In 1892 it was reorganized as a voluntary religious association, known as The First Church of Christ, Scientist, in Boston, but called more frequently by its adherents, "The Mother Church." The total number of recognized branches of The Mother Church in the United States reported for the fiscal year ending May 31, 1943, was 2,190, and there are also 70 college and university organizations. Total branches for the world, 2,879.

The affairs of The Mother Church are administered by a board of directors which supervises the work of the board of education, board of lectureship, and Committee on Publication. The board of education instructs and authorizes students to teach Christian Science. The board of lectureship consists of 25 members who are engaged in delivering free lectures on Christian Science.

The Christian Science Publishing Society, whose affairs are administered by a board of trustees according to the Manual of the Church, issues the daily paper of the organization, *The Christian Science Monitor*. Other periodicals include *The Christian Science Journal*, *Christian Science Sentinel*, *Christian Science Quarterly*, and four editions of *The Herald of Christian Science*, in the German, French, Dutch, and Scandinavian languages, each with the English translation opposite, and in Braille.

Mrs. Daisette D. S. McKenzie is president of The Mother Church for the year 1943-44. Headquarters are at 107 Falmouth Street, Boston, Mass.

CHRISTMAS ISLAND. The name of two separate islands. (1) An island in the Indian Ocean (10° 30' S. and 105° 40' E.), a dependency of the Straits Settlements. Area, 60 square miles. Population (Jan. 1, 1941, estimate), 1,431. In 1940 the main imports were iron, steel manufactures, building materials, oil, and foodstuffs; exports consisted of phosphate of lime (238,006 tons). On Apr. 10, 1942, Japanese armed forces occupied the island. (2) The largest atoll in the Pacific (2° N. and 157° W.), over 100 miles in circumference, included in the Gilbert and Ellice Islands Colony (q.v.). It is leased to the Central Pacific Coconut Plantations, Ltd.; for a period of 87 years from Jan. 1, 1914. Population (1937), 47.

CHROME, CHROMITE. See CHROMIUM.

CHROMIUM. Ability of the Allies to keep open the sea lanes, coupled with restrictions upon use and substitutions in the steel industry, banished any threat of a possible chromium shortage in 1943. At the outset of the war, loss of the Philippines, which had contributed as much as one-quarter of United States consumption, coupled with cutting of the sea lanes to India, New Caledonia, and

Turkey, and dangers to shipping from Africa threatened to throw this country back on virtually undeveloped, low-grade domestic ore resources. Convenience of Atlantic ore deposits to lend-lease trade routes, upon which returning vessels were in need of ballast, availability of Cuban ore, and finally opening of the Mediterranean sea lanes to Turkey, all were factors favoring maintenance of imports on a high level. Early in 1943, the government ordered curtailment of development of one low-grade Montana deposit, and, on October 27, announced that operations in low-grade Montana chrome mines were to be put in stand-by condition and labor diverted to mines producing more critically needed minerals. Concurrently, it was announced that no new government purchase contracts would be entered into for the import of chemical chromite.

Domestic production consisted of mines in Glenn and San Luis Obispo Counties, California, two new and unique plants on the Oregon coast, and more or less seasonal and irregular production from several score northern California and Oregon "kidney" deposits. The War Production Board throughout the year frowned on construction of beneficiation plants to concentrate low-grade domestic ores, thus ruling out what had appeared to be an essential stopgap earlier in the war. The Metals Reserve Co., Federal ore-buying agency, has committed itself to a purchase of small lots of chrome ores from domestic mines through 1944. On May 15, Metals Reserve smoothed out its purchase price schedule in effect at 21 depots in ten western States. It was at these depots that most of the smaller mines sold their ore.

In the form of ferro-chrome, chromium is added as an alloying element to produce corrosion and heat-resistant steels. This use most frequently comes to the public eye in the form of so-called "stainless" steel. In September, 1941, there was devised a series of alloy steels, known as the National Emergency Steels, whose use of alloying elements was considerably less than normal. In 1943, 4,250,000 tons, or about one-third of the United States production of alloy steels, consisted of low alloy NE steels saving vast quantities of such important alloying elements as chrome. At the same time, alloy steel scrap was being generated faster than it was consumed until at the end of the year this excess amounted to 100,000 tons of scrap per month. About one-quarter of the chrome being melted at the end of 1943 came from scrap, thus an abundant supply from this source was assured.

Domestic ore production for chrome in the pre-war period was 1,506 tons annually. In 1943 it was 100,000 tons. Consumption prewar was 362,873 tons annually, and in 1943, 900,000 tons. Stocks at the end of 1943 were 1,100,000 tons. The easier chrome supply is reflected in the War Production Board's removal of high carbon chrome from allocation and easing of restrictions on use of chrome alloys. See GEOLOGICAL SURVEY; TURKEY.

CHARLES T. POST.

CHRONOLOGY. See introduction, pp. xiv, xv.

CHRYSOITILE. See ASBESTOS.

CHURCHES. See RELIGIOUS ORGANIZATIONS.

CHURCH OF ENGLAND. See ENGLAND, CHURCH OF.

CIGARS, CIGARETTES. See TOBACCO.

C.I.O. Congress of Industrial Organizations. See listing under SOCIETIES; NATIONAL LABOR RELATIONS BOARD; LABOR CONDITIONS under *Union Movements*.

CITIZENS DEFENSE CORPS, SERVICE CORPS. See CIVILIAN DEFENSE, OFFICE OF.

CITRUS PRODUCTS. See **HORTICULTURE.**

CIVIL AERONAUTICS ADMINISTRATION (CAA). A branch of the U.S. Department of Commerce which encourages and fosters the development of civil aeronautics and air commerce; encourages the establishment of civil airways, landing areas, and other air navigation aids and facilities; designates and establishes Federal airways; acquires, establishes, operates, and maintains air navigation facilities along civil airways and at landing areas; makes provision for the control and protection of air traffic moving in air commerce; undertakes or supervises technical developmental work in the field of aeronautics; plans for the development of aeronautical facilities; and administers the affairs of the Washington National Airport.

The Administrator also carries out civil aeronautics safety regulation (excepting the prescribing of safety standards, rules and regulations, and the suspension and revocation of certificates after hearing).

The CAA War Training Service is now chiefly engaged in providing elementary flight instruction for Army and Navy aviation cadets in conjunction with the college programs of the armed services, and in training a group of Air Corps Enlisted Reservists on inactive status for employment as non-combat service pilots. It is also conducting several flight schools for the training of instructors for the Navy. Pilot training is not now being provided for civilians as such (see 1943 *YEAR BOOK* for the former Civilian Pilot Training Program).

Vital contributions to national defense are also made by the Federal Airways System and by the technical development work of the CAA. The Federal Airways System now comprises a network of more than 40,000 miles of "highways of the Air." It is being expanded and improved throughout Alaska. Installations in Hawaii and the Pacific Islands, as well as in the Caribbean area, are now proving their military value.

Development work is proceeding in the fields of ultrahigh frequency communication and directional guidance facilities; monitoring equipment; flutter and vibration of aircraft components; engine nacelle fires; airport design; soil testing and stabilization; airport lighting; obstruction marking by radio; traffic control; instrument landing systems; and aeronautical charts. See **AERONAUTICS.**

Administrator in 1943: Charles I. Stanton.

CIVIL AERONAUTICS AUTHORITY. A division of the U.S. Department of Commerce. Its functions are discharged by the Civil Aeronautics Administration and the Civil Aeronautics Board (qq.v.).

CIVIL AERONAUTICS BOARD (CAB). A five-man non-partisan board organized independently within the U.S. Department of Commerce. It prescribes safety standards and regulations and has the power to suspend and revoke safety certificates, regulates air carriers, makes accident rulings and recommendations, and investigates accidents. Chairman in 1943: L. Welch Pogue. See **AERONAUTICS** under *Postwar Air Policy*.

CIVIL AIR PATROL (CAP). See **CIVILIAN DEFENSE, OFFICE OF.**

CIVIL DISOBEDIENCE. See **INDIA** under *History*.

CIVILIAN DEFENSE, U.S. Office of (OCD). The U.S. Office of Civilian Defense was established May 20, 1941, for the purpose of assuring effective coordination of Federal relations with State and

local governments engaged in the furtherance of the War Program; to provide for necessary cooperation with State and local governments with respect to measures for adequate protection of the civilian population in emergency periods and to facilitate constructive participation in the war effort.

To carry out its purpose, the Office has two principal divisions: Protection and Civilian War Services. The Protection Branch has the responsibility of safeguarding the nation against the effects of enemy attack, trains and organizes volunteers in blackouts, camouflage and protective construction, defense from bombs and gas, decontamination of gassed areas, rescue of endangered persons and civilian casualties, evacuation, demolition of damaged structures and clearance of necessary thoroughfares, repair of disrupted utilities, auxiliary fire and police services, and many other "passive" defense measures. These programs are carried on through the U.S. Citizens Defense Corps.

The Civilian War Services Branch assists State and local governments in organizing Defense Councils to serve as the focal point for coordination of community resources in meeting local problems arising from the war. Activities include the fields of health, nutrition, housing, consumer interests, recreation, salvage, transportation, agricultural labor, war savings, services to service men, and other programs prepared in cooperation with other Federal agencies responsible for such activities. Through the volunteer offices of the Defense Councils, citizens are provided with means to participate actively in the war programs of their local community, and are enrolled as members of the Citizens Service Corps.

During 1943, community Civilian Protection units proved useful in a number of natural disasters such as floods, fires, tornadoes, train wrecks, mine explosions, war plant and aviation accidents—while Civilian War Services volunteers participated in bond drives, salvage campaigns, and other war programs.

In the Protection Branch, in addition to the Office of the Chief, there are the Protection, Medical, and Facility Security Divisions. In the Civilian War Services Branch the divisions are those of the Chief, National Programs, and Defense Council Organization. These divisions are organized into technical and service sections appropriate to the scope of the Branch. The National Office itself is headed by a director, assisted by an administrative staff. Nine regional offices are maintained with regional liaison officers in constant contact with State and local Defense Councils, thereby lending assistance in the development and execution of national programs.

There are 11,486 Defense Councils in the United States. Under these Councils functions the Citizens Defense Corps, consisting of Air Raid Wardens, Fire Guards, Auxiliary Firemen, Auxiliary Police, Emergency Medical Services, Rescue Units, Emergency Welfare Services, Messengers, Control Center Personnel, Demolition and Clearance, Road Repair, Utility Repair, and other units. Under them also functions the Citizens Service Corps, which consists of volunteers active in the war services field.

Civilian War Services. Many valuable contributions were made by Civilian War Services volunteers during 1943. In connection with the Third War Loan Drive in September, Defense Council volunteer forces cooperated with the U.S. Treasury Department in selling war bonds and stamps. The Chicago, Ill., Defense Council, through Block

Leaders and others, made approximately 250,000 bond sales for a total of more than \$35,000,000. The services of 4,683 block workers were utilized in a house-to-house canvass in Portland, Ore., which produced several millions of dollars in war bond sales. In Oklahoma City, Okla., 2,500 women sold \$375,000 in bonds as part of their neighborhood service work. During 1943 many communities also put their block organizations to work with excellent results on programs involving car-sharing, housing, and vacant room surveys, explanation of point rationing, survey of day-care needs for children of working mothers, securing donations to the blood plasma bank, victory garden campaign, scrap collection, tin can processing and collection, manpower and womanpower surveys for war industries, and the promotion of part-time or full-time aid to farmers.

In Fayetteville, N.C., block workers campaigned to encourage inoculation against typhoid fever, diphtheria, and smallpox. In Fort Smith, Ark., when the May floods broke the city's water supply mains, block leaders took the job of designating where free water would be dispensed and helped staff the dispensing stations. LaJunta, Colo., used its block workers to check a diphtheria epidemic, while in Philadelphia block wardens helped in the campaign to enlist qualified young women in the Women's Army Corps.

Cooperating with the U.S. Department of Agriculture, Defense Council committees engaged in an over-all campaign to promote the production, sharing, and proper use of food. Throughout the nation, these councils helped mobilize townspeople for work on farms and in food processing plants and in the development of 20 million Victory Gardens. In addition, consumer committees cooperated in the OPA's market basket and home front pledge campaigns to combat black markets, and sponsored clothing clinics, swap shops, and courses in the care and repair of household equipment as part of the general war conservation program. Consumer committees worked closely with war price and rationing boards in enlisting community understanding and action in price control and rationing programs.

Over 1,000 Child Care committees were organized by Defense Councils during 1943 to study the needs and promote community-wide programs for children of working mothers. In 500 communities, Federal funds amounting to over \$12,000,000 had been provided under the Latham Act to enable war-impact areas to open nurseries and preschool centers, and OCD volunteers helped conduct surveys so that the best possible use of these grants could be made.

War Service volunteers in several States made complete rosters of all available nursing personnel and established these rosters on a county basis with a registered nurse in charge of the records. Nurses were called out for special services in fires, train wrecks, floods, etc. Defense Council Health committees took part in a campaign to recruit men volunteers for work in hospitals to relieve the acute shortage of orderlies and maintenance men. This campaign was sponsored in cooperation with the American Hospital Association.

Salvage committees, established by the War Production Board and incorporated into the Defense Council structure in most communities, conducted salvage of scrap metals, fats and greases, silk and nylon hose, and other needed materials. Transportation committees worked with OPA, ODT, and other agencies in sponsoring car-sharing so as to conserve private automobiles, tires, and gasoline.

To recognize officially the war services of boys and girls under 16 and to provide Defense Councils with a mechanism for planning war service projects for organized and unaffiliated youth, the OCD during 1943 established the Junior Citizens Service Corps. In line with this youth program, States have set up committees whose personnel represents youth interests on a State-wide basis. Typical war services being performed by junior groups include the collection of scrap materials; assistance at child care centers, war price and rationing boards; help at recreation centers and hospitals; participation in national war bond and stamp drives, and the raising and conservation of food.

Civilian Protection. In order to bring to local communities the best advice obtainable on technical subjects, the Protection Branch of OCD formed a Technical Board combining the diverse talents of scientific leaders in the fields of engineering, medicine, and technology. It also organized the Industrial Protection Council to operate in the field of industrial plant protection. Leading national figures representing management, labor, and the government have made their specialized knowledge available through the Industrial Protection Council, and during the year important new methods of protection for all industrial plants, especially those carrying particular war responsibilities, were introduced. The National Security Award was established, in line with the plant protection program, to recognize those industrial plants which had developed superior safeguards against the hazards of fire, accident, and sabotage, as well as air raid attack. The first of these Awards was made early in November.

Another 1943 development was the organization of the Fire Guard unit of the Air Raid Warden's Service, which absorbed the former Fire Watcher's Service, broadening the responsibilities of OCD volunteers with respect to the control of small fires of every nature. Although the Fire Guard unit is not yet fully recruited, trained, or equipped, it has already demonstrated its usefulness in preventing fires under wartime conditions, thereby helping to reduce the national fire loss. The OCD equipment allocations program involved fire-fighting equipment in a volume greater than that produced in the last 25 years. It also included medical supplies for 5,400 medical field team units and for 1,500 casualty stations. Gas masks produced are held in reserve in strategic locations for rapid shipment in case they are needed.

Commissions and individual representatives of OCD visited Great Britain to obtain the best factual information for civilian protection in America. Reports received at frequent intervals from an attaché in the United States Embassy in London were made available to operating officers in both the Washington and Regional offices. As of Oct. 20, 1943, 433 general reports and 116 medical reports had been received.

The basic system of air raid signals was modified by Army regulations in February and concurred in by OCD in order to provide intermediate audible public warnings between the confidential "Yellow" and the "Red." A number of tests and exercises familiarized the public with these regulations and with the new signals. Exception was made for West Coast communities which retained signals specified by the Commanding General of the Western Defense Command. Extensive work was done to improve methods of blackout and dimout in coastal areas and important war centers. Dimout regulations were placed in force on the

coasts to reduce sky glow and combat submarine sinkings. Dimout regulations were suspended by the Army and Navy in October, with a possibility of their return should the situation warrant it.

Following extensive engineering tests, a program for clearly marking and designating portions of existing buildings as air raid shelters was carried out. OCD worked with manufacturers to develop and make available sound machines capable of carrying air raid warnings great distances, which would not require the use of critical materials. Satisfactory military progress, leading to a decrease in air raid hazards in the interior areas resulted in a review of the problems of civilian protection, and some decrease in the protective forces in these areas was suggested in accordance with the lessened danger. Revised standards of protection training were established by regulation. The system of schools and courses to train members of the Defense Corps was revised in mid-year. The War Department-OCD Civilian Protection schools were discontinued June 30.

During the year, the Facility Security Division and its Sections, which had been primarily concerned with sabotage, were expanded to include plant protection. The voluntary inspection program provides for some measure of security for plants, the protection of which is not the responsibility of the Army, Navy, or Federal Power Commission.

On April 29 the Civil Air Patrol, created a week before Pearl Harbor on the initiative of America's private flyers, was placed under the jurisdiction of the War Department. The CAP, which had been directed and trained by the Office of Civilian Defense, performed valuable services such as the reporting of planes crashed on sea or land, dropping supplies to survivors, sending ground crews on rescue missions, forest fire patrol, transportation of blood plasma, etc.

The War Emergency Radio Service, a system of two-way communication was widely used in disasters such as floods and fires. Specific authorization of the Federal Communications Commission was given to this service. Also activated in numerous emergencies was the Emergency Welfare Service which brings together under one head five major functional services: (1) information and service centers; (2) food and housing centers; (3) central registry; (4) clothing centers, and (5) rehousing and rehabilitation. In war disasters, these services have operated jointly with State authorities and the American Red Cross.

The well-organized and well-trained forces of the Emergency Medical Services were called into action during emergencies to administer strategically based stocks of blood plasma, to function as mobile medical teams administering life-saving procedures at the scene of the incident, and in hospitalizing and caring for serious casualties. The Medical Division, in cooperation with the U.S. Public Health Service, has 153,290 units of liquid, dried, and frozen plasma in all important communities throughout the United States for civilian use in emergencies. Grants were made to 168 hospitals to enable them to establish blood and plasma banks. In twenty coastal States, 321 institutions in relatively safe inland areas have been designated as Emergency Base Hospitals, and groups of physicians in more than 100 medical schools and hospitals have responded to the invitation of OCD and the Surgeon General of the U.S. Public Health Service to form hospital units of 15 doctors each. Nurse deputies of State and local Chiefs of the EMS are recruiting nurses for

service to civilians at Emergency Base Hospitals and for the temporary care of military casualties.

The organization of gas defense elements in critical zones proceeded during the year, courses being given in schools operated jointly by OCD and the War Department. A total of 61 State gas specialist courses were conducted. On the basis of British experience, the Rescue Service was reconstituted and greatly enlarged and two pilot schools held to train instructors, one at the U.S. Bureau of Mines Experiment Station at Pittsburgh, Pa., and the other at the University of California College of Mining, Berkeley, Calif. A demonstration of the nature and effects of enemy air raids, "Action Overhead," staffed by members of the Chemical Warfare Service, U.S. Army, was conducted in 124 cities before a total of 2,260,000 persons.

Thus, during 1943, a great home front army of volunteers, trained in the techniques of civilian defense, not only protected the nation against possible enemy attack, but in the War Services protected America's well-being in numerous other ways. Towards the close of the year, civilian defense, keeping pace with the changing trends of the global war, went increasingly on the offensive. On Sept. 10, 1943, James M. Landis resigned as U.S. Director of the Office of Civilian Defense to become American Director of Economic Operations in the Middle East. Since that date John B. Martin has been Acting Director.

See MINES, BUREAU OF; STATE LEGISLATION under *War and Postwar*; SOCIAL SECURITY BOARD.

JOHN B. MARTIN.

CIVILIAN PREINDUCTION TRAINING BRANCH. See EDUCATION.

CIVILIAN PUBLIC SERVICE CAMPS (for conscientious objectors). See SELECTIVE SERVICE SYSTEM.

CIVILIAN REQUIREMENTS AND SUPPLIES. See AGRICULTURE; BUSINESS REVIEW; LIVING COSTS; POSTWAR PLANNING; WAR PRODUCTION BOARD under *Civilian Requirements*. For the Office of Civilian Requirements (OCR), see WAR PRODUCTION BOARD.

CIVILIAN WAR SERVICES BRANCH. See CIVILIAN DEFENSE, OFFICE OF.

CIVIL SERVICE COMMISSION, U.S. The recruitment of employees for the war agencies of the Federal Government, and the testing of their qualifications, are responsibilities of the U.S. Civil Service Commission. In the face of a growing labor shortage, it was necessary for the Commission during 1943 to develop every available source of manpower in order that Government employment might achieve its optimum wartime strength.

The Commission encouraged Government agencies to employ the physically handicapped, and during the 12 months ended Sept. 30, 1943, more than 17,000 physically handicapped persons were placed in all types of jobs in Federal establishments. Records show that they are making good.

Special attention was given to the placement of the returning war veteran. All possible steps were taken to keep wounded and other discharged veterans informed of their opportunities for Federal employment. Veterans who had left other than temporary Federal jobs to enter the armed forces were reinstated, in accordance with the law, in their old jobs or in similar ones, if they applied for reinstatement within 40 days of their honorable discharge and were still qualified to do the work. The Commission established a unit within its organization to work full-time on veteran problems.

The increased employment of women provided another answer to the Commission's recruiting problem. At the end of the fiscal year 1943, an army of nearly 1,000,000 women was at work for the Federal Government. Besides filling the traditional "women's" jobs, in clerical and professional fields, women, by the thousands, were at work on production lines in Government-operated armament plants, such as navy yards and arsenals.

By July, 1943, total employment in the Federal executive civil service had reached 3,156,953: the Government's personnel had trebled in the three years since the inauguration of the national-defense program. Only 9 per cent of these employees were located in the departments and agencies in Washington, D.C. The great majority were located in field establishments of the Government throughout the country, and 154,500 were on duty outside the continental United States.

In the days of mass staffing of war agencies, the effort to get employees on the job quickly led, in a considerable number of instances, to a lowering of examination requirements. In 1943, however, with Federal employment at the 3,000,000 mark, the Civil Service Commission was able to bend its efforts from the task of high-speed recruitment and placement of emergency workers and to give increasingly greater attention to the strengthening of examination standards. Speed, the Commission felt, must continue to be a factor, but there was a point, the Commission declared, below which requirements must not be set if the appointment of inadequately qualified persons, and a consequent slowing down of the war program, was to be avoided. On a par with the Commission's move to tighten examination requirements was the program, launched in 1942 and broadened in 1943, to bring about maximum utilization of present manpower resources in carrying on the war activities of the Government.

At the outset of the war, thousands of Federal employees were found to be working below their highest skills, and other thousands were found to be using their highest skills for only a part of the work day. To combat this waste, the Commission, under authority of Executive orders and a War Manpower Commission directive, in 1942, established a vigorous war-transfer program. When the Commission determined that transfer would result in a more effective contribution to the war program, employees found to be working below their top skills were assigned to other agencies or, in some cases, to public or private enterprise. In 1943, in line with the Commission's expanding policy of maximum utilization of personnel, the program was carried straight to the employee: Federal workers were urged to make it known if their highest skills were not being fully used in the war effort. In the 21 months following the start of the program in 1942, over 100,000 war transfers were effected.

Additional transfer activity and personnel utilization resulted from the passage of legislation providing for the payment of overtime compensation to civilian employees of the Federal Government (Public Law 821, approved Dec. 22, 1942, and Public Law 49, which replaced it on May 7, 1943). Agencies which the Director of the Bureau of the Budget found to have excessive personnel were required, under these laws, to reduce their personnel or to forego overtime pay, and the Civil Service Commission was responsible for effecting the transfer of any employees released under these laws whose services were needed in other agencies. Approximately 4,000 such inter-agency transfers

had been effected by the end of September, 1943.

The Commission urged Government agencies to conduct surveys which would disclose under-utilization of employees' skills. Agencies were asked to analyze employees' needs for training, and to provide adequate training facilities. Reports of 11 such surveys showed that they covered 39,246 positions and resulted in elimination of 2,782 positions and reassignment of 623 employees to positions in which their skills were better utilized.

In order to improve supervision, the Commission sponsored Government-wide adaptation of the plan developed for industry by the Training Within Industry branch of the War Manpower Commission (q.v.). As a result of this program, more than 100,000 supervisors in the Federal service had been given training by the end of November, 1943. See *LAW* under *Legal Education*.

HARRY B. MITCHELL.

CLAIMANT AGENCIES. See *WAR PRODUCTION BOARD* under *Balanced Production*.

CLOTHING. See *FASHION EVENTS; LIVING COSTS; HIDES, LEATHER, AND SHOES; TEXTILES*.

CMP. Controlled Materials Plan. See *WAR PRODUCTION BOARD* under *Balanced Production*; also *BUSINESS REVIEW; MOTOR VEHICLES*.

COAL AND COKE. Beset by labor shortages and work stoppages, the United States coal industry was hard put to keep up with demand during 1943. Harold Ickes, Solid Fuels Administrator for War, declared that consumption and exports of bituminous coal exceeded production by 21,000,000 tons. Stocks in the hands of consumers and dealers by Jan. 1, 1944, amounted to 60,078,000 tons, according to Mr. Ickes, less than at any time since March, 1942.

The anthracite situation was not much better although production was close on the heels of 1942 when 60,328,000 net tons of Pennsylvania anthracite was produced. In 1943, estimated production was 60,327,000 tons.

Estimates of production of bituminous coal and lignite for 1943 approximated 589 million net tons compared to 580 million net tons mined in 1942 and 579,385,820 in 1918.

The principal reason for shortage, however, was demand rather than supply. Industrial plants and railroads ran at capacity throughout the year. Heavy railroad traffic to the Pacific Northwest resulted in severe coal shortages in that area which had to be filled by diversion from Canada, and Canada's needs in turn, had to be partially satisfied by diversion from midwestern coal regions of the United States.

Record metallurgical activity, principally in the iron and steel industry, brought forth production of 71,950,000 net tons of by-product and beehive coke in 1943, almost 1,500,000 tons more than the previous year. The greater proportion of this output and increase was in the by-product coke category, where production increased 2.5 per cent over 1942 to 63,850,000 tons. Beehive production, most of which came from obsolete ovens rehabilitated after years of idleness, was estimated at 8,100,000 tons, about the same as 1942. The U.S. Bureau of Mines estimated the value of by-product coke production to be \$390,000,000 and of beehive, \$48,000,000, together about three per cent greater than 1942. The increase partially reflected higher prices authorized by OPA. Value of chemical by-products was estimated to be \$195,000,000.

The postwar future of beehive ovens appears to be even darker than their immediate prewar past because of the construction of substantial by-

product coking capacity as an integral part of the steel expansion program.

Four major labor stoppages occurred in the coal industry during 1943. The first commenced May 1 and continued until May 4, after expiration of a 30-day extension of the bituminous miners' agreement with operators and the expiration of the regular anthracite agreement. At issue were demands by the United Mine Workers union for a pay increase of \$2.00 a day, portal-to-portal pay, and related benefits. Solid Fuels Administrator Ickes took over all producing mines in the name of the government on May 1, as directed by President Roosevelt. John L. Lewis, president of the United Mine Workers, proclaimed a 15-day strike moratorium and ordered all miners back to the pits on the terms of the old agreement pending negotiations with the government to end the walk-out. On May 16, this truce was extended until May 31. The second strike occurred the first five days in June, the issues remaining unsettled. Again, a 15-day truce was declared. At the end of this truce a third walk-out occurred, the government again taking over the mines. Then a further truce was declared until October 31, and the mines once again were returned to their owners. On November 1 a fourth strike was called, this time lasting three days. This time, again after government seizure, Solid Fuels Administrator Ickes signed a contract with Mr. Lewis by which the miners extended their working time and received a wage increase of \$1.50 a day. Previously the miners had been granted an increase of \$1.50 a week for blacksmithing, safety equipment, and other incidentals. The mines were being returned to private management one by one at the end of the year.

Mr. Ickes also made news with the prediction that the time was approaching when petroleum must be supplemented as an industrial and domestic fuel and as a source of gasoline and that there was immediate need to develop on a commercial basis methods of making liquid fuel from coal, lignite, or oil shale. He stated that he hoped soon to "lend an official hand" in this development.

See CHEMISTRY; GREAT BRITAIN under *History*; HEATING AND VENTILATING; MINES, BUREAU OF; NATIONAL WAR LABOR BOARD; SOLID FUELS ADMINISTRATION; WAR PRODUCTION BOARD.

CHARLES T. POST.

COAST AND GEODETIC SURVEY. A branch of the U.S. Department of Commerce. In addition to surveying and charting the coasts, it compiles tide and current tables, aeronautical charts, magnetic information, seismological and gravitational and astronomical observations. All operations of the Survey are now being carried on to meet war needs. Director in 1943: Leo Otis Colbert.

COAST GUARD, U.S. The wartime expansion of the Coast Guard outlined in detail in the 1943 YEAR BOOK has continued during the past year. From a total of 1,516 officers and 17,546 men in the service in 1941, manpower was increased in 1943 to well over 170,000 men.

To add further to the strength of Coast Guard personnel, the Women's Reserve of the U.S. Coast Guard Reserve, popularly called the SPARS, has recruited 6,000 officers and enlisted personnel. They will be used to replace in shore establishments those men who are able for duty at sea or abroad. The recruiting program for more women will continue for some time. The enlisted women are now trained at Palm Beach, Fla., and the officers at Coast Guard Academy, New London, Conn.

During 1943 Coast Guard floating equipment also reached an all-time peak. In addition to nearly doubling the number of its own craft of all kinds, the Coast Guard has been manning a total of 215 vessels of the U.S. Navy, including troop transports, LST's (tank landing ships), LCI's (infantry landing craft), cargo vessels, 173-foot PC boats, and 110-foot subchasers. Since the report in the last YEAR BOOK, the Coast Guard has lost three of its ships: the 165-foot cutter *Escanaba*, the 117-foot *Natsek*, and the patrol ship *Wilcox*. Personnel losses have been sustained not only in connection with sinkings but also during landing operations on enemy beaches.

Throughout 1943, the Coast Guard, in harmony with the changes that have taken place in the war, has shifted the emphasis on its several functions to some degree. Internal change within the organization itself has also resulted in a shift of emphasis. For example, the Coast Guard Auxiliary, with its 47,000 civilian volunteer members, has undertaken a training program that would make its members available for any type of service on the home front that the fortunes of war might demand. The Auxiliary no longer has flotillas of its own craft (privately owned by the members) in operation as waterfront patrol units. Instead it operates regular Coast Guard Reserve vessels. One of the most important developments within the Coast Guard during 1943 was a rapid growth of the Volunteer Port Security Forces, made up of civilians in leading American ports, who have volunteered for duty as guards along essential waterfront installations, thereby relieving a proportionate number of regular Coast Guard personnel for other duty. The authorized strength of the Volunteer Port Security Forces is 19,000 in the sixteen largest ports.

The main activities of the Coast Guard during 1943 were roughly centered about its traditional functions as America's maritime police force and its wartime emergency operations, as a part of the Navy, all over the globe. Among the latter can be counted the landing of American troops in Sicily and, later, upon the Italian mainland. LST's and LCI's were first used in the former action. To supply trained men to effect the landings, the Coast Guard assigned a great number of its officers and men periodically throughout the year to special amphibious units. Replacements for many of these men were secured from the SPARS. During 1943, the Battle of the Atlantic and the struggle to get American shipping through to Allied ports took a decided turn for the better. The Coast Guard continued throughout the year to contribute to the effectiveness of the convoy escort system used to combat the submarine menace. Two of the more notable actions in this battle were those of the *Campbell*, a large, sea-going cutter of the 327-foot class, which engaged six submarines in the space of twelve hours on Feb. 22, 1943, and of her sister ship, the *Spencer*, which captured almost the entire crew of a German submarine after a running gun fight.

With the year 1943 characterized by the increased flow of American men and supplies to foreign battlefronts and a proportionate increase in the volume of shipping going out of American ports, the Coast Guard has been giving concentrated attention to those of its functions relating to merchant ships. Its Division of Marine Inspection, charged with regulating the safety of vessels and crews at sea, has conducted constant investigations, tests, and experiments to improve old lifesaving equipment and to devise new. The Coast Guard

has also regulated the security of vessels while in port and drilled merchant seamen in lifesaving measures. The result of its campaign to promote maritime safety, in the face of the normal hazards of sea being augmented by wartime conditions, has been an encouraging drop in the number of lives lost due to sinkings. The Commandant of the Coast Guard has further integrated the Coast Guard's maritime functions by appointing a Merchant Marine Council within the Service. All those main divisions of the Coast Guard which work primarily with the Merchant Marine are represented on the Council. In order to synchronize the Coast Guard's administrative functions with the shipping industry, the Council is assisted by a panel of consultants selected for their ability in certain fields within the Merchant Marine industry. Such consultants attend conferences that deal with phases of shipping within their fields, and their suggestions are constantly utilized by the Council, which is primarily a fact-finding and advisory body. Thus, the Coast Guard has been able to avail itself of the advice and suggestions of the industry itself before promulgating regulations or establishing policies which affect it. With the war's outcome dependent upon the Merchant Marine, this has brought about a degree of effectiveness in regulating the latter that has proved highly successful.

It is probable that 1943 will represent the peak year of Coast Guard expansion. Beyond replacements, it is not likely that the Service will expand much further under wartime conditions. Meanwhile, it has consolidated its peacetime role of maritime policeman and its wartime role of an operational part of the Navy. It is prepared both in equipment and in manpower to continue the discharge of its particular and general wartime functions without abrogating its many peacetime activities.

RUSSELL R. WAESCHE.

COCHIN CHINA. See FRENCH INDO-CHINA.

CODE OF WARTIME PRACTICES. See CENSORSHIP, OFFICE OF.

COFFEE. See PAN AMERICAN UNION.

COINS, COINAGE. See CHEMISTRY under *Alloys*; COPPER; SILVER.

COLLECTIVE BARGAINING. See LABOR CONDITIONS; NATIONAL LABOR RELATIONS BOARD; NATIONAL WAR LABOR BOARD.

COLLEGES. See UNIVERSITIES AND COLLEGES.

COLOMBIA. A South American republic. Capital, Bogotá.

Area and Population. Area, 439,828 square miles; estimated population, 9,523,200 in 1942 (8,701,816 at 1938 census). About 10 per cent of the population is estimated to be pure white, 10-15 per cent Indian, 30-50 per cent mestizo, and 30-35 per cent Negro, mulatto, and zambo (Negro and Indian). Among the 34,322 foreigners counted in 1938 were 9,942 Venezuelans, 2,887 Americans, 2,977 Germans, 1,944 British, 1,448 Italians, 1,059 Poles, 1,055 French. Estimated populations of the chief cities in 1942 were: Bogotá, 395,300; Medellín, 198,100; Barranquilla, 183,500; Cali, 121,300. In 1940 Manizales had 90,628; Cartagena, 88,228; Ibagué, 64,830; Cúcuta, 60,194; Bucaramanga, 54,160; Pasto, 51,699.

Defense. Military training for one year and service in the reserve for nine years is compulsory. The army's peace strength in 1941 was 15,850 men; trained reserves, 100,000; active air force, 1,150 men with about 80 planes. Police number

about 5,000. The navy has 2 modern destroyers, 3 sea-going gunboats, 3 coastal patrol vessels, and 4 river gunboats. United States aviation and naval missions were contracted for in 1938 and a military mission in 1942. Colombia's armed forces and coastal defenses were strengthened with the aid of a lend-lease agreement signed in Washington Mar. 17, 1942. This reportedly called for delivery of U.S. war material valued at from \$20,000,000 to \$30,000,000.

Education and Religion. About 19.5 per cent of the urban population and 80.5 per cent of the rural population are estimated to be illiterate. Besides 571 private schools, there were in January, 1942, 525 kindergartens, with 13,400 pupils; 8,562 primary schools, with 570,061 pupils; 185 night schools, with 9,989 pupils; 450 high schools, with 34,599 pupils; 29 religious schools, with 1,657 pupils; and 58 preparatory schools and five public universities, with 7,635 students. A School of Business Administration, the first of its kind in South America, was opened in Bogotá Feb. 4, 1943, with cooperation of the Office of the Coordinator of Inter-American Affairs at Washington. Roman Catholicism is the prevailing religion, but the Church was disestablished in 1936. A revised concordat conforming to the 1936 amendments to the Colombian Constitution (see 1936 YEAR BOOK) was approved by Congress in December, 1942.

Production. An unofficial estimate placed the value of production of the chief industries in 1940 at about one billion pesos, divided as follows: Agriculture, 40 per cent; livestock, 20 per cent; factories, 20 per cent; mines, 10 per cent. In 1941 coffee and petroleum accounted for 92.8 per cent of the value of all exports. Colombia ranks second to Brazil as a coffee producer. Coffee exports in 1941 were about 2,912,000 bags (of 132 lb.) against 4,443,000 bags in 1940. The total coffee crop in 1940-41 was 270,000 metric tons; cane sugar, 57,941 metric tons in 1941; cotton, 27,500,000 lb. in 1940-41. Other leading crops are bananas, rice, cereals, potatoes, cacao, and tobacco. There were estimated to be 9,000,000 beef cattle, 1,500,000 horses and mules, and 1,000,000 sheep in 1941. Due to the shortage of tankers, petroleum production declined from 24,639,000 bbl. in 1941 to 10,590,000 bbl. in 1942. The 1942 output of gold, silver, and platinum was valued at about \$23,001,780. Gold exports amounted to \$11,974,074 in 1942 (\$24,337,143 in 1941); exports of crude platinum, 49,162 troy oz. worth \$1,274,575 in 1942. Coal output, 415,395 metric tons in 1942. As of Jan. 1, 1941, Colombia had 1,541 industrial establishments with an aggregate capital investment of 122,413,000 pesos. The leading industries, in order of the value of capital invested, were: Textiles and yarns, beer, sugar refining, cement, grain milling, cigars and cigarettes, metal manufactures.

Foreign Trade. Including bullion and specie, general imports in 1942 amounted to 104,972,242 Colombian pesos (170,040,000 in 1941) and exports to 185,760,000 pesos (176,160,000 in 1941). The United States supplied imports valued at 62,521,374 pesos in 1942 and took exports valued at 154,741,035 pesos. For values of leading export items in 1941, see 1943 YEAR BOOK.

Finance. In the national budget estimates for the calendar year 1943, revenues and expenditures balanced at 122,509,400 pesos (about \$71,055,460). The budget for 1942 closed with a reported deficit of 7,148,000 pesos.

The public debt on Dec. 31, 1942, was: Internal, 168,000,000 pesos; external, \$56,000,000 (157,000,000 pesos and \$53,000,000 respectively on

Dec. 31, 1941). The Colombian peso exchanged at an average official rate of \$0.57 in 1941 and 1942.

Transportation. In 1942 there were 5,346 miles of navigable waterways, 1,395 miles of railways (mostly government-owned), over 14,336 miles of highways, and an extensive network of national airlines operated by the government-controlled Avianca Airways. Completion in December, 1941, of a line connecting the Antioquia and Pacific railways provided the first modern transportation link between the Magdalena River and the Pacific ocean (port of Buenaventura). A highway from Cali to the Pacific, completed in 1942, gave the national highway system its first outlet to that ocean. Railways and cableways in 1940 transported 3,017,000 metric tons of freight compared with 898,000 tons transported on the Magdalena River. Pan American Airways provided international air connections through Barranquilla and Cali. The chief ports are Cartagena, Barranquilla, and Santa Marta on the Caribbean and Buenaventura on the Pacific. Also see *History*.

Government. The Constitution of Aug. 5, 1886, vests executive power in a President elected for four years by direct popular vote and ineligible for reelection for four years after completion of his term. A Congress of two houses exercises the legislative power. The Senate has 56 members, elected for 4 years by departmental assemblies; the Chamber of Deputies, 118 members, elected for 2 years by direct suffrage. Extensive amendments to the Constitution were voted in 1936 (see 1936 YEAR BOOK, p. 174 f.). President, Alfonso López Pumarejo (Liberal), who was elected May 1, 1942, and assumed office Aug. 7, 1942. For the Congressional elections and other developments in 1943, see below.

HISTORY

Political Developments. Colombia during 1943 continued the policy of close collaboration with the United States, reflected in the severance of diplomatic relations with the major Axis powers in December, 1941 (see table under WORLD WAR). However the attention of the Government and people was concentrated mainly upon internal political and economic problems until the sinking of a Colombian ship by a German submarine on the night of November 17 led the Senate on November 27 to approve, 33 to 13, a declaration of a state of war against the Reich. On December 3 a Supreme Council of National Defense was created and steps were taken to intern German nationals and defend the country.

Elections. The biennial elections to the Chamber of Deputies and the departmental assemblies were held on March 21. The Liberals, who had been in power continuously since 1930, retained control of both houses of Congress. In the Chamber of Deputies, the Liberals won 73 seats against about 50 by the Conservatives. The Liberals were split into the majority left-wing faction led by President López, which captured 60 seats, and the dissident conservative wing with 13 seats. For the first time in Colombian history, a Communist was elected to the Chamber. The Liberals also maintained control of 13 of the 14 departmental assemblies, thus assuring the election of a predominantly Liberal Senate in April.

When the newly elected Congress convened on July 20, several Cabinet Ministers came in for severe criticism. Rather than allow Congressional opposition to these Ministers to obstruct the Government's legislative program, the entire Cabinet resigned on August 16. The reorganized Ministry

appointed by President López on August 24 contained only five new faces and brought no important change in Government policy.

Soon afterward a factional struggle developed over the question as to who was to be the Liberal candidate for President in the 1946 election. This led to the resignation of Foreign Minister Gabriel Turbay on September 24 and of Minister of Government Darío Echandía and Alberto Lleras Camargo, Ambassador to Washington, on October 7. The national committee of the Liberal party then intervened to smooth out the quarrels that were delaying Congressional action on needed internal measures. A solution was found through the resignation of the entire Cabinet on October 8 and the appointment by President López the following day of a Ministry giving representation to all Liberal factions. Lleras Camargo headed the new Cabinet as Minister of Government. President López offered to resign to end the dissension within the Liberal party but his offer was refused by the Cabinet.

The new Government was confronted immediately with the problem of ending a serious strike of transport workers which had virtually paralyzed traffic. Clashes between strikers and the police in Caldas led President López on October 8 to declare a state of siege in that department.

On November 19 President López turned over the executive powers temporarily to Acting President Darío Echandía while López took his wife to the United States for medical treatment. The Cabinet again resigned and was immediately reappointed. The declaration of war against Germany took place while López was absent.

Measures Against Inflation. The foregoing political maneuverings formed the background against which the Government moved to put into operation drastic measures for the control of currency and price inflation and for otherwise safeguarding the national economy against the impact of the war. As described in the 1943 YEAR BOOK, the shipping shortage and other war restrictions had greatly curtailed imports into Colombia, while exports of coffee, strategic minerals, rubber, etc., were maintained. The result was a piling up of excess reserves of dollar exchange; a decline in Government revenues, construction, retail sales, and other activities dependent upon imports; a sharp rise in rents and prices; and the spread of unemployment.

To check the inflationary trend, the Government on Dec. 18, 1942, promulgated a law providing for the issuance of up to 60,000,000 pesos of National Economic Defense Bonds and for a drastic increase in taxes to service the bonds. Income, excess profits, and property taxes were raised 35 per cent and inheritance and gift taxes 20 per cent. Moreover, a 50-per-cent surtax was levied on income, excess profits, and property taxes. Proceeds of the bond issue were to be used to pay off the 1942 budget deficit, balance the 1943 budget, and to increase the appropriations for local governmental units, public works, and for promotion of education, social welfare, agriculture, and industry. Investment in the bonds was made compulsory for savings banks, insurance companies, the larger businesses, and the National Coffee Fund. For a detailed analysis of this complicated legislation, see *Foreign Commerce Weekly*, Apr. 10, 1943, p. 8 f.

This fiscal program was supplemented by a so-called "Economic Plan," adopted by a special session of Congress on February 28 and approved by the President Mar. 2, 1943. This law provided for: (1) The control of prices of essential commodities, (2) the establishment or subsidization of certain

cooperatives, (3) the creation of a Board of Economic Defense to study certain problems and to propose methods of financing the Government's plans in respect to its recommendations, (4) the establishment of the office of Presidential Auditor to secure better and more economical Government service, (5) the reorganization of the Administration of National Railways and the National Bureau of Transportation and Rates, (6) the possible suspension or modification of the exchange-control system, (7) the issuance of 50,000,000 pesos of internal bonds to stimulate the nationalization of public utilities and of foreign interests under fiduciary administration, and (8) the modification of the organization of official and semiofficial credit institutions.

In carrying out this law, the President on May 11 established the Office of Price Control under a Price Comptroller, assisted by a board of four members representing labor, manufacturers, farmers, and importers. The Comptroller was authorized to issue regulations fixing maximum and minimum prices, to prevent monopolies, institute rationing, arrange for the purchase and sale of commercial articles through the issuance and cancellation of licenses, and issue import and export permits in concurrence with the Office of Exchange and Export Control.

Another decree of June 10 imposed a three-fold check on expansion of the currency by means of (1) compulsory investment of a substantial proportion of company profits in "frozen-deposit certificates," (2) similar investments by importers in amounts equal to one-tenth of their remittances for foreign goods, and (3) the doubling of the legal deposit coverage reserves of the banks. At the same time the Superintendent of Banking barred marginal trading on the stock exchanges. On August 8 the President asked Congress to approve the immediate issuance of the internal bonds called for under the law of March 2, to the amount of 25,000,000 pesos.

Other Internal Events. A serious outbreak of malaria occurred early in the year on the Guajira Peninsula. Doctors and medical supplies were flown to the town of Uribia on the peninsula in mid-January by the U.S. naval attaché in Bogotá. They reported that about 5,000 of the 40,000 inhabitants of the area had already succumbed to the disease.

By unanimous vote of the judges of the Colombian Superior Court, a woman was appointed judge of the Criminal Court in Bogotá on June 13.

Relations with United States. Colombia-United States relations were marked during 1943 by the visit of Vice President Henry Wallace to Colombia in April and by the extension of economic collaboration, particularly in the development of communications and rubber production in the Colombian section of the Amazon Basin. The establishment of a Colombian-American commission to supervise the rubber procurement drive was announced February 19. A week later a Bogotá newspaper reported that airplanes were carrying two tons of raw rubber from camps in the Colombian jungle every day and returning with food and supplies for the rubber gatherers.

President López on March 10 issued a decree authorizing the Rubber Development Co. of the United States to construct a road from Villavicencio, capital of the Intendancy of Meta, to Calamar, in the Commissariat of Vaupés, a distance of 218 miles. These and other developments financed by United States agencies in connection with the rubber program helped to absorb a part of the unemployed from other sections of the republic. In Au-

gust the Finance Minister asked the Colombian Congress to approve a 12-year, 4-per-cent loan from the U.S. Export-Import Bank in an amount equivalent to 14,000,000 pesos. The agreement under which a United States naval mission was sent to Colombia in 1938 was extended for one year through an exchange of notes in July-August.

Other Foreign Relations. The establishment of diplomatic relations between Colombia and the Soviet Union, arranged in 1930 but never carried into effect, was implemented by the exchange of Ministers in 1943. The first Chinese Minister to Colombia presented his credentials in July. The Colombian Government was petitioned to enter the war against the Axis by several departmental assemblies and by the labor unions before the submarine attacks. It kept a sharp watch on Axis citizens and suspected agents, and took steps to nationalize Axis-owned properties under a Presidential decree issued in June. See *CHEMISTRY* under *Foreign*; *ROADS AND STREETS*; *SPANISH-AMERICAN LITERATURES*; *WORLD WAR*.

COLONIAL DEVELOPMENT AND WELFARE ACT. See *BRITISH WEST INDIES* and *GREAT BRITAIN* under *History*.

COLONIAL REFORMS. See *FRANCE* and *GREAT BRITAIN* under *History*.

COLORADO. A mountain State. Area: 104,247 sq. mi. Population: 1,123,296 (1940 census); 1,057,977 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. *AGRICULTURE*; *MINERAL PRODUCTION*; *ROADS AND STREETS*; *SCHOOLS*; *SOCIAL SECURITY BOARD*; *TAXATION*; *UNIVERSITIES*; and *VITAL STATISTICS*. The census of manufactures has been suspended for the time being; for the latest information, see 1941 *YEAR BOOK*, p. 430.

Elections. See the article *ELECTIONS IN THE UNITED STATES*; also, for incumbents, *HOUSE OF REPRESENTATIVES* and *SENATE*.

Legislation. See the separate article on *STATE LEGISLATION*.

Officers. The Governor is John C. Vivian (Rep.), inaugurated in January, 1943, for a two-year term; Lieutenant Governor, William E. Higby; Secretary of State, Walter F. Morrison; Attorney General, Gail L. Ireland.

See *AQUEDUCTS*; *DAMS*; *MOLYBDENUM*; *TUNNELS*.

COMBAT CAMERA UNITS. See *PHOTOGRAPHY*.

COMBINED CHIEFS OF STAFF. The Combined Chiefs of Staff are, in effect, the "Board of Directors" of the joint American-British war effort. Eight high ranking specialists in three dimensional war—land, sea, air—compose the Combined Chiefs of Staff.

The four United States members of the group are known as the Joint United States Chiefs of Staff, and between them represent this country's highest command. The four British members are known as Representatives of the British Chiefs of Staff, and reflect the opinions and decisions of the British Chiefs of Staff in London.

U.S. MEMBERS: Admiral W. D. Leahy, Chief of Staff to the Commander in Chief of the Army and Navy; General G. C. Marshall, Chief of Staff, U.S. Army; Admiral E. J. King, Commander in Chief, U.S. Fleet, and Chief of Naval Operations; General H. H. Arnold, Commanding General, Army Air Forces.

BRITISH MEMBERS: Field Marshal Sir John Dill, Head of British Joint Staff Mission in Washington; Admiral Sir Percy Noble; Lt. General G. N. Macready; Air Marshal Sir William L. Welsh.

Responsible to the Combined Chiefs of Staff are the several supporting committees covering every field of military activity. The *Combined Staff Planners* are concerned with military planning, particularly strategical planning. The *Combined Intelligence Committee* is responsible for all intelligence matters. The *Combined Military Transportation Committee* is responsible for shipping and transportation. The *Munitions Assignments Board* (q.v.) acts in an advisory capacity to the Combined Chiefs of Staff on all supply matters and is responsible for the allocation of all finished war material, drawing on the entire munitions resources of the United States and Great Britain. The *Combined Communication Board* is responsible for matters concerning all phases of communications. The *Combined Meteorological Committee* is responsible for all matters pertaining to weather forecast.

Any subject not specifically assigned to one of the above committees comes under the cognizance of the Combined Staff Planners.

COMBINED FOOD BOARD (United States, United Kingdom, and Canada). A Board created on June 9, 1942, by the President of the United States and the Prime Minister of Great Britain, to obtain a planned and expeditious utilization of the food resources of the United Nations in order to coordinate further the prosecution of the war. For details, see 1943 YEAR BOOK, p. 162. In October, 1943, the Canadian Prime Minister accepted membership in behalf of Canada. Chairman: Claude R. Wickard, Secretary of Agriculture.

COMBINED PRODUCTION AND RESOURCES BOARD. A Board created by the President of the United States and the Prime Minister of the United Kingdom on June 9, 1942, for the most effective use of the combined resources of the United States and the United Kingdom for the prosecution of the war.

Members: United States, Donald M. Nelson; United Kingdom, Oliver Lyttelton; Canada, C. D. Howe. For details, see 1943 YEAR BOOK, p. 163.

See WAR PRODUCTION BOARD under *Balanced Production*.

COMBINED RAW MATERIALS BOARD (United States and Great Britain). A Board created Jan. 26, 1942, by President Roosevelt and Prime Minister Churchill to mobilize the raw material resources available to the United States and United Kingdom for the most effective combined use against the enemy. The Board is composed of the following: United States Member, William L. Batt, and Executive Secretary, F. M. Eaton (who is also Chairman of the Operating Committee); United Kingdom Member, Sir Charles Hambro, and Executive Secretary, George Archer. For details, see 1943 YEAR BOOK, p. 163. See WAR PRODUCTION BOARD under *Balanced Production*; HIDES, LEATHER, AND SHOES.

COMBINED SHIPPING ADJUSTMENT BOARD. See MARITIME COMMISSION, U.S.

COMBINED TRAINING CENTER. See MILITARY PROGRESS.

COMETS. Comet 1942 (g). This comet was discovered in December, but it was visible to the naked eye during the early months of 1943. It passed through perihelion February 6, and its maximum brightness was magnitude 3.8. It crossed the bowl of the Big Dipper at the end of February and remained visible to the naked eye during most of April.

Comet 1943 (a). This was an unexpected comet

and was discovered on April 17 by Miss Oterma at the Turku (Finland) Observatory.

Comet 1943 (b). This new comet was discovered at the National Observatory of Bucharest, Rumania, by Diamaca and was independently discovered by Peltier at Delphos, Ohio.

In the course of October two periodic comets were recovered. The first one, Comet Comas Solá' 1927 III, was found by Miss Oterma at Turku (Finland) on October 2. This comet was discovered Nov. 4, 1926. It has a period of 8½ years and this was its second return.

The second one was Comet D'Arrest, first observed this year on October 24 by Van Biesbroeck. This comet was first discovered in 1851 at Leipzig. It has a period of about seven years and was last previously observed in 1923; it was missed on its returns of 1929 and 1936.

RICHMOND T. ZOCH.

COMICS. See MAGAZINES.

COMINTERN. See CHINA AND UNION OF SOVIET SOCIALIST REPUBLICS under *History*.

COMMERCE. See TRADE, FOREIGN. For *Domestic Commerce*, see BUSINESS REVIEW and products.

COMMERCE, U.S. Department of. A Department of the U.S. Government, which in 1943 had the following important branches.

Office of the Secretary
Bureau of the Census
Coast and Geodetic Survey
Bureau of Foreign and Domestic Commerce
National Bureau of Standards (q.v.)
Patent Office (q.v.)
Weather Bureau (see METEOROLOGY)
Civil Aeronautics Administration (q.v.)

The Secretary of Commerce in 1943 was Jesse H. Jones. See POSTWAR PLANNING.

COMMODITY CREDIT CORPORATION (CCC). See AGRICULTURE; COTTON; FOOD INDUSTRY under *Prices and Subsidies*; FOREIGN ECONOMIC ADMINISTRATION; HAITI under *History*; U.S. under *Inflation*.

COMMONWEALTH FUND. This endowment, established in 1918 by Mrs. Stephen V. Harkness "to do something for the welfare of mankind" now amounts to approximately \$48,000,000. In the year ending Sept. 30, 1943, the Fund appropriated \$1,503,124; more than half was devoted to activities tending to promote or maintain physical and mental health.

Public health activities, designed to raise standards of rural service, centered in Tennessee, Mississippi, and Oklahoma. Fourteen rural community hospitals built or remodeled with aid from the Fund were at work during the year; these hospitals stress opportunities for professional education as well as standards of medical, nursing, and technical service. New construction has been postponed till after the war. Fellowships were offered to instructors in medical schools and provision was made for visiting instructors, without restriction as to field; continued aid was given to departments of preventive medicine and psychiatry, to various forms of postgraduate medical education, and to teaching arrangements designed to promote interplay between pediatrics and psychiatry. More than \$324,000 was appropriated for medical research. The Commonwealth Fund Fellowships for British graduate students at American universities are suspended during the war, but eighteen fellowships for postgraduate study in medicine and public health were made available to Latin-Americans. The Fund continued to aid child guidance enterprises in England; contributed to an advisory serv-

ice for community mental hygiene clinics in the United States; and published during the year seven books of educational significance in its fields of operation. Since the beginning of the war the Fund has set aside nearly \$1,250,000 for war relief and related purposes. The directors of the Fund are: Malcolm P. Aldrich (president), William E. Birdsall, Phil W. Bunnell, Adrian M. Massie, Lewis Perry, William E. Stevenson, and Thomas D. Thacher. Its offices are at 41 East 57 Street, New York.

COMMUNICATIONS, Electrical. The Board of War Communications (q.v.) continues in full control of United States communication facilities—wire, radio, and cable. International radio telephone communications to or from points outside the Western hemisphere continue under ban (see **CENSORSHIP, OFFICE OF**) except as sponsored by a government agency. Military requirements, and commercial and industrial requirements related to military needs, continue to take priority over civilian requirements, but with little serious interference with the latter. Indicative of the expansion of military communications is the fact that as of June 30, 1943, the Signal Corps of the Army Service Forces numbered some 280,000 men and 28,000 officers, twice the enrollment of the total peacetime regular Army. As the result of the magnitude of the distances involved in modern military operations and the high degree of mobility of units, radio communications far outweigh wire communications in the current war.

One of the most important developments in the communications industry in some time is the study, initiated late in the year by the U.S. Senate, of the whole pattern of world communications. This study apparently is intended to embrace possible plans of a merger of the United States' international communications companies, and will probe the position in global communications of the British Cables and Wireless. The study is to be conducted by the Senate Interstate Commerce Subcommittee, and is to be of extreme importance and significance to domestic communications as well as to international communications.

Stimulated by the shortage of copper, copper-covered steel wire was developed for high-frequency communication lines, and found to be as efficient as solid copper wire for such transmission. See also **CHEMISTRY** under **Quartz**; **PLATINUM**; **NATIONAL BUREAU OF STANDARDS**.

Radio. The 14 privately owned short-wave broadcasting stations (one built since Pearl Harbor) and eight commercial communications transmitters formerly used for point-to-point telephone, radio program, or radio-photo service, have been leased jointly for the duration of the war by the Office of War Information and the Coordinator of Inter-American Affairs (qq.v.). The 22 relatively low-powered commercial transmitters currently are being replaced by high-powered transmitters. The programs internationally broadcast by these two Federal agencies constitute an integral part of American psychological warfare. Office of War Information's international message, the "Voice of America," is aimed at five listening groups: enemy areas, Axis-occupied areas, neutral countries, the United Nations, and Allied-occupied areas. It is heard 24 hours a day in more than 40 languages and dialects in a total of more than 3,200 quarter-hour productions per week. See also **EDUCATION**, **U.S. OFFICE OF** and **CIVILIAN DEFENSE**.

The U.S. Army now is using more radio equipment than was manufactured for the entire nation

during peacetime. Total radio production in the United States, which about a year ago stood at a level of about \$30,000,000 a month, currently is up to \$250,000,000 a month—representing a rate of increase considerably in excess of that of general war production. All such production is for the armed services, which use many radio-electronic devices in addition to radios for tanks, aircraft, battleships and other naval craft, field sets for the Army, radio compasses, direction finders, altimeters, and other devices.

The Federal Communications Commission (q.v.) has made an inventory of excess radio equipment possessed by radio stations, and catalogued this equipment for the benefit of stations wishing to purchase equipment, thus avoiding the placing of many orders with manufacturers already overtaxed by war orders. At the suggestion of the War Production Board, Federal Communications Commission issued an order under which all domestic broadcasting stations, without disturbing service, effected operating changes as a wartime means of extending the life of transmitter tubes. War Production Board also simplified and standardized parts for home radios and similar equipment, to assure wider maintenance and repair.

In May, 1943, the U.S. Supreme Court ruled that the Federal Communications Commission has the power to force its regulations on the industry, thus confirming and consolidating the series of reforms imposed upon the industry during the past two years. Among the more important of these requirements are: (a) Stations affiliated with one network cannot be prevented from carrying programs of other networks; (b) network programs rejected by any affiliated station may be offered to any other station in the area of the affiliated station; (c) chains no longer can require affiliated stations to accord "exclusive option time," thus giving individual stations a greater degree of control over their more desirable program hours. See **LAW** under *Supervision of Federal Agencies*.

For ship stations, single-cabinet units were developed which provide both high-frequency and intermediate-frequency communication facilities in one "package." Thus, all the components required for a 200-watt dual transmitter for a complete ship radio station are, with the exception of batteries and antennas, all mounted in a single cabinet approximately 87 inches wide, 72 inches high, and 19 inches deep. As it has been found in many cases that low-frequency radio signals penetrate atmospheric disturbances better than do the higher frequencies, special low-frequency continuous-wave transmitter equipment has been designed for use in Arctic regions where severe atmospheric disturbances are encountered. Several transmitters of this special design have been put into service by the Civil Aeronautics Administration.

An "electrical camouflage" may be thrown around a radio broadcasting station by means of newly developed electronic equipment. It is claimed that by such means a broadcasting station can be "concealed" to a degree that should make it unnecessary for such station to go off the air at times of approaching air raids.

INFORMATION OMITTED AT THE REQUEST OF THE
U.S. WAR DEPARTMENT

INFORMATION OMITTED AT THE REQUEST OF THE
U.S. WAR DEPARTMENT

INFORMATION OMITTED AT THE REQUEST OF THE
U.S. WAR DEPARTMENT

For developments in the broadcasting industry, see RADIO PROGRAMS. See ILLUMINATION.

Telegraphy. By mid-year 1943, monthly receipts for domestic telegraph showed an increase of some 70 per cent over the level prevailing in January, 1940. Some of the greatest expansions have been in private-line service between defense plants and government agencies, and in tie-lines in defense areas. Like long-distance telephone calls, telegrams are on a priority basis.

To implement the merger of the Western Union and Postal Telegraph Systems, which was consummated during the year, the FCC (q.v.) authorized the new domestic consolidated telegraph company to eliminate some 1,800 duplicate telegraph offices throughout the country. Meanwhile, the American Telephone and Telegraph Company is reported as completing an inventory of its TWX and leased-wire services, with a possible view toward selling them to the consolidated Western Union Telegraph Company, although no formal propositions are known to have been submitted by either.

Although the war interrupted submarine cable communications of American companies between the United States and Europe and Far Eastern points, direct facilities still are available to the British Isles, Portugal, Gibraltar, the Azores, Hawaii, and Midway. Also, there is complete cable service in the Western hemisphere uninterrupted by the war, to the West Indies and along both coasts of South America, and to Alaska where the submarine cables have been modernized to carry heavy traffic. On the basis of the number of messages, it is estimated that 65 per cent of the world international telegraph traffic currently is handled by cable, and 35 per cent by radio. Domestic radiotelegraph traffic continues to be suspended under war security regulations to obviate foreign pick-up. In spite of the discontinuance of direct radio and telegraph communication with many European countries, international radiotelegraph service to and from the United States has expanded greatly since the beginning of the war. For example, prior to Pearl Harbor, radiotelegraph communication between the United States and Australia was relayed via Montreal. Now, the traffic is routed over direct circuits. Since 1939, new direct radiotelegraph circuits have been established to Egypt, Iceland, Paraguay, Bolivia, New Caledonia, Greenland, New Zealand, Iran, French Equatorial Africa, Belgian Congo, Algiers, British Gold Coast, Bermuda, Afghanistan, and to numerous points in the European and Asiatic Union of Soviet Socialist Republics and unoccupied China. A direct radiotelephone service between New York City and Moscow was established late in the year by the American Telephone and Telegraph Com-

pany, to operate on an FCC-approved initial rate of \$21 for three minutes. As the circuit crosses over the "top of the earth" near the magnetic pole, several months of test and experimentation were involved in its development.

As a war service, a special "Expeditionary Force Message Service" was established for both cable and radiotelegraph circuits; 104 fixed texts were established, the combination of any three of them offering the sender a means of covering nearly all occasions for a standard rate of 60 cents or its equivalent in other currencies. This is purely an overseas service for the benefit of the members of the American Expeditionary Forces and the persons communicating with them.

See NATIONAL LABOR RELATIONS BOARD.

Telephony. Rated as the last important competitive telephone system in a major American city, the Keystone Telephone System, serving the city of Philadelphia and a few counties in southern New Jersey, was approved by the Federal Communications Commission (q.v.) for acquisition by the Bell Telephone System. The 13,800 Philadelphia customers of the Keystone system were to be taken over by the Pennsylvania Bell Company, but only about 14 per cent of these will be new Bell System customers, as the remaining 86 per cent also were Bell subscribers. The subscribers in southern New Jersey counties were to be taken over by the New Jersey Bell Company.

One of the interesting developments of the year in new communication circuits is the 2,000-mile combined voice and telegraph circuits built as a part of the Alaska Highway (q.v.). Because of the imminence of tree and storm trouble, this line was strung with high-strength steel-core wire. There are two pairs of conductors, and over each pair of wires there will be provision for a d-c telegraph circuit and a carrier system providing two channels for voice and 12 telegraph channels to be used for telegraph service. In general, the carrier channels will be used for through transmission, while the d-c telegraph and the voice circuits will be used for point-to-point communication along the route and for necessary maintenance communications. Ten repeater stations are required to keep transmission up to desired levels.

The fact that 10,000 new business telephones were connected during the first eight months of 1943, as compared with 52,000 loss during the same period of 1942, reflected the improved status of small business concerns. As the result of restriction orders, the number of residence telephone extensions decreased by 54,000 during the eight-month period. By the year-end, approximately 600,000 unfilled applications had accumulated as the result of limitations in available facilities. In spite of this, the net gain in total telephones connected amounted to 1,200,000, five out of six of which were residence installations. A half-million of the old-style desk telephones were salvaged from the discard and put back into service.

Long-distance lines of the Bell system were estimated to have handled some 729,000,000 toll messages during 1943, and it is expected that some 809,000,000 will be handled during 1944, almost double the figure for 1939. Bell system engineers estimate that, to handle this volume of traffic at the same level of speed and service that prevailed in 1943, the system would require 25 per cent more new toll circuits than are expected to be available under prevailing limitations of men and materials. Toll calls out of Washington, D.C., alone now are reported to average some 42,000 a day, as contrasted with 24,000 a day just

before Pearl Harbor. Under war conditions the speed of handling toll calls has declined steadily—1.6 minutes average in 1941, 2.3 in 1942, 3.7 in 1943.

Incidental to long-distance telephone service, two "firsts" were recorded, indicating at least something of the trend of postwar developments. In Philadelphia the first dial-type toll-switching system in the United States was placed in service during the late summer and early fall. The system enables the toll operator in one city to ring a called telephone in another city directly, without the help of an intervening operator. To the telephone subscriber, this system means faster service on long-distance calls; to the telephone system it means less time lost on busy circuits. A total of approximately 2,000 circuits were initially cut in to the new Philadelphia system. At Culver City, Calif., the first automatic toll-ticketing office in the country was put into service. This equipment is particularly significant with respect to large metropolitan areas where many relatively short-distance toll calls between communities are involved, and where, under presently prevailing systems, the subscriber must suffer the delay of dialing an operator to establish the connection. With the new automatic toll-ticketing equipment, it is possible for an extended-service subscriber in Culver City to dial a subscriber in nearby Los Angeles or other adjoining communities with the same ease and facility that a local dial call can be made. The complete record of the call is made by the message-ticketer, saving the operator the time and effort required to write out a toll ticket long-hand.

According to present estimates there are about 26,500,000 telephones in the United States, some 17,000,000 of which are residence telephones. About 21,500,000 of these instruments belong to the Bell System; the remaining 5,000,000 to the 6,300 independent telephone companies and the 60,000 rural or farm lines. As of the year-end, it was expected that sufficient telephones will continue to be available to take care of all "essential" telephone users as defined by WPB and to provide for what the Board calls "essential growth." In some areas, however, additional telephone service for civilian consumers has been possible only by "degrading" the service—changing over to party-line service.

Illustrative of telephone systems developed and operated by the Signal Corps of the Allied Nations is the modern telephone network which now links the ancient city of Baghdad in Asia with the city of Tunis in northwest Africa. This is strictly a military network, built by the (British) Royal Corps of Signals, the lines of which cross 3,765 miles of desert terrain. The system includes three main exchanges and several smaller ones, and more than a score of repeater or amplifying stations along the route. Most of the repeater stations are far-removed from civilization, and each has its own power plant, water tanks, and cooking facilities. In many instances, food and water must be carried as much as a hundred miles. The exchanges involve the most modern equipment, and are, for the most part, in air-conditioned buildings, and staffed by girl operators. The network provides carrier (multi-channel) type of equipment, with stand-by lines for emergencies. As the North African war progressed westward, battle headquarters were constantly linked directly with Cairo and other strategic points by means of the network. See also LEND-LEASE PROGRAM.

Another development of military significance is a carrier-system developed in conjunction with the

U.S. Army Signal Corps and suitable for distances up to 150 miles or so. The system centers around a special cable designed for rapid and simple installation as well as ease of operation. The system provides four telephone circuits, one of which will ordinarily be used for voice-frequency telegraph operation to obtain four duplex telegraph circuits. In addition two simplex circuits are provided. The cable is a special four-wire rubber-insulated cable with loading coils at the junction points of the quarter-mile cable sections. One pair of conductors serves to transmit in one direction, the other pair in the opposite direction. Still another significant military development is a common-battery cradle-type telephone set, especially designed with respect to moisture-proofing and performance under difficult weather conditions, for use in tropical areas such as abound in the Pacific war zone. An evidence of Yankee resourcefulness is reported from Iceland where U.S. Army Signal Corps technicians are reported to have collected toothpaste tubes from camp and community to combine the salvaged tin with available lead to provide an improvised solder that was badly needed for rush work.

A new sound-recording machine was announced in New York City late in 1943. This device, reported as a compact affair not much bigger than a portable radio, makes records on cellophane tape. These records are reported to be first-class as to tone, and superior to any previous records in durability, ease of production, and low cost. The high-fidelity cellophane record is reported to cost only 50 cents per hour of recording to make, and to be satisfactorily playable several thousand times.

Television. Broad claims were made for a new system of television broadcast, announced late in the year by Dr. Palmer H. Craig, head of the Department of Electrical Engineering at the University of Florida, in speaking before a group of television experts at the Yale Club in New York City. By getting rid of the present "scanning" principle of television cameras, the new system was declared to be free of all of the major technical difficulties that have beset television to date. Claims are (a) that instead of being limited essentially to the visual horizon, it will broadcast television programs over distances comparable to radio broadcasts; (b) that it will eliminate the necessity for the supremely high-powered illumination required to secure clear images with present television cameras; (c) that it can make use of the same wavelength as radio, instead of being limited to the high-frequency range; (d) that it will greatly reduce the cost of television broadcasting.

The current system of translating an image into electrical impulses for television broadcasting involves the use of a television camera, which "scans" the whole image in a series of 240,000 or more separate impressions, recorded in series all within the space of one-thirtieth of a second. This system requires lighting rivaling direct sunlight, and requires a wide band of frequencies the room for which can be found only in the high-frequency broadcasting range. In the proposed new system the "scanning" problem is simplified by a device which records the 240,000 separate divisions of an image simultaneously instead of in sequence. The result is a complex wave of 240,000 elements that, it is claimed, could be broadcast with relatively little power on a relatively narrow wave-band, and would be unscrambled by a "scanning" device in the receiver. So far, only the separate elements of the proposed equipment have been evolved, the proposer hoping that the tele-

vision industry can be interested in this new and seemingly simplified system before it becomes too heavily involved in developing and promoting the system and equipment as currently understood.

For the benefit of wounded service men in hospitals in the New York metropolitan area, the National Broadcasting Company and the New York Telephone Company made joint use of their respective facilities October 25 to broadcast the annual Rodeo from Madison Square Garden. Special amplifier and equalizer equipment was used in adapting the telephone lines to the transmission of the television signals. Although technical difficulties are involved, it seems possible that telephone lines and cables may become as closely associated with postwar television broadcasts as they now are with radio-sound broadcasts. Automatic radio-relay stations also are envisioned for interstation television transmission.

See **MILITARY PROGRESS under Communications.**
G. ROSS HENNINGER.

COMMUNISM. See ARGENTINA, AUSTRALIA, BRAZIL, CHILE, CHINA, CUBA, FINLAND, FRANCE, GERMANY, GREAT BRITAIN, GREECE, HUNGARY, ITALY, JAPAN, MEXICO, POLAND, RUMANIA, SPAIN, SWITZERLAND, UNION OF SOVIET SOCIALIST REPUBLICS, and YUGOSLAVIA, *under History*; SOCIALISM; LAW *under Decisions Concerning Personal Liberties.*

COMMUNITY CHESTS AND COUNCILS, Inc. A national membership association of community and war chests and councils of social agencies, organized in February, 1918, as a national clearing house of ideas and service for community chests and councils of social agencies. For description see the Year Book for 1939. Of the 946 community and war chests and councils of social agencies in operation by the end of 1943 (683 chests and 263 councils) 652 chests and 247 councils were in continental United States, 2 chests and 2 councils in the territory of Hawaii, 27 chests and 14 councils in Canada, and 2 chests in South Africa. All but two cities of 100,000 population and over in the United States have community chests or similar plans. Approximately fifteen and a half million contributions in 649 cities provided a total of \$162,334,486 for community and war chests to be used for private social work in their communities and for domestic and foreign war relief during 1943.

The officers of the association in 1943-44 were: honorary president, Gerard Swope, New York City; president, E. A. Roberts of the city of Philadelphia, Pa.; vice-presidents, Col. Robert Cutler, Washington, D.C. and Harry P. Wareham, Rochester, N.Y.; treasurer, J. Herbert Case, Plainfield, N.J.; secretary, Lynn D. Mowat, Los Angeles, Calif.

COMMUNITY TRUSTS. On Dec. 31, 1942, 76 community trusts and foundations in continental United States, Canada, and Hawaii, held principal resources totaling \$56,036,000 compared with \$54,275,000 at the previous year end. Funds of the Chicago Community Trust aggregated \$10,600,000 while the New York Community Trust's capital was \$10,036,487. The Cleveland Foundation had assets of \$8,147,103; the Permanent Charity Fund, Boston, \$5,689,515; the Winnipeg (Canada) Foundation, \$3,456,581; and the Indianapolis Foundation, \$2,597,100. Sizable trusts were located also in Minneapolis, Richmond, Philadelphia, Buffalo, and Los Angeles.

For the twelfth consecutive year combined disbursements exceeded one million dollars, totaling \$1,725,095 compared with \$1,605,801 paid out in

1941. The New York Community Trust's allocations totaled \$547,262. Corresponding appropriations were \$242,941 in Chicago, \$235,300 in Boston, and \$222,450 in Cleveland. Foundations in Indianapolis, Winston-Salem, and Winnipeg also made substantial outpayments. During 1942, the Cleveland Foundation increased its capital funds with additions totaling \$1,445,580, while the New York Community Trust received \$423,390 in new funds. New Haven, Philadelphia and Providence, R.I., also reported appreciable capital increases.

Thomas M. Debevoise and Winthrop W. Aldrich are respectively Chairmen of the Distribution Committee and Trustees' Committee of The New York Community Trust. Ralph Hayes is the Director with offices located at 120 Broadway, New York City.

COMMUNITY WAR SERVICES, Office of. See FEDERAL SECURITY AGENCY. Compare WAR COMMUNITIES.
COMORO ISLANDS. See under MADAGASCAR.
COMPAR. See PLASTICS.

COMPTROLLER OF THE CURRENCY, Bureau of the. A Bureau of the U.S. Department of the Treasury which has general supervision over national banks; established 1863. Comptroller: Preston Delano.

COMPULSORY LABOR. See LABOR CONDITIONS; the belligerent countries under *History*, especially AUSTRALIA, BELGIUM, BOHEMIA AND MORAVIA, BOLIVIA, CANADA, FRANCE, FINLAND, GERMANY, GREAT BRITAIN, ITALY, NETHERLANDS, NEW ZEALAND, NORWAY, and the Axis-occupied countries.

CONCENTRATION CAMPS. See articles on the Axis countries and the occupied countries of Europe.

CONCILIATION SERVICE, U.S. During 1943 the Conciliation Service continued its efforts to bring harmonious labor-management relations to the nation's wartime economy. This was a larger task than in previous years because of a new realization throughout the country of the value of labor-management harmony in meeting production schedules.

From Jan. 1, 1943, to Dec. 1, 1943, the case load of the Service increased 60 per cent over the similar period in 1942, reaching an all-time maximum; 12,396 disputes were settled involving more than four million workers. In other words, the Service settled an average of 37 disputes a day during this period. More Commissioners of Conciliation were employed than at any previous time, and a number of changes were instituted, such as the establishment of offices for twelve Regional Representatives to effect cooperation with the National War Labor Board (q.v.), and the decentralization of three of the five Conciliation Service regions. Additional work was undertaken both by the technical and arbitration units. The arbitration unit handed down more awards than at any other time. The technical unit extended its service into a total of thirty-five industries, answering increased demands for information on job evaluation, classification, and wage incentive methods.

The decentralization of the Service was initiated following general patterns of current governmental procedure. The Chicago area was the first region to be decentralized. This program was set up in April with the San Francisco and New York decentralization programs following in October and December respectively. It is hoped that this plan will effectuate faster and more efficient service to both industry and labor.

During the first eleven months of 1943 the Serv-

ice answered requests of employers, employees, and other interested parties, and disposed of 13,555 situations involving 5,018,364 workers. Of these situations 1,804 were strikes and lockouts involving 754,060 workers; 10,592 were threatened strikes and controversies involving 3,933,243 workers. During this time 3,608 disputes were certified to the NWLB; jurisdiction was assumed by other agencies in 642 others. The remaining 3,032 situations included investigations, technical services, arbitrations, requests for information, consultations, etc.

The facilities of the Service were used in 29 major industrial fields, and in 48 States, the District of Columbia, Alaska, Puerto Rico, Hawaii, and the Virgin Islands.

JOHN R. STEELMAN.

CONFERENCES, International. See UNITED NATIONS.

CONGESTED PRODUCTION AREAS, Committee for. A Committee established within the Executive Office of the President, by an executive order of Apr. 7, 1943, to provide an effective means of coordinating Federal, State, and local governmental activities in congested production areas. Chairman in 1943: Harold D. Smith, the Director of the Bureau of the Budget. Director: Corrington Gill.

CONGO, Belgian. See BELGIAN CONGO.

CONGO, French. See FRENCH EQUATORIAL AFRICA.

CONGREGATIONAL CHRISTIAN CHURCHES, The General Council of the. A general council was instituted at Seattle, Wash., June 27, 1931, when the National Council of the Congregational Churches in the United States and the General Convention of the Christian Church merged their activities in this new organization. The last biennial meeting of the General Council was held at Durham, N.H., June 18 to 25, 1942.

The headquarters of the General Council of the Congregational Christian Churches are at 287 Fourth Avenue, New York City. Those of the Board of Home Missions at the same address, with offices also at 14 Beacon St., Boston, Mass., and those of the American Board of Commissioners for Foreign Missions at 14 Beacon St., Boston, Mass. For statistics, see RELIGIOUS ORGANIZATIONS.

CONGRESS, U.S. For a list, see HOUSE OF REPRESENTATIVES; SENATE. See also ELECTIONS. For enactments and activities, see UNITED STATES.

CONGRESS OF INDUSTRIAL ORGANIZATIONS (C.I.O.). See listing under SOCIETIES; LABOR CONDITIONS under Labor Movements; NATIONAL LABOR RELATIONS BOARD.

CONNALLY-SMITH BILL. See LABOR CONDITIONS under Federal Labor Legislation; UNITED STATES.

CONNECTICUT. A New England State. Area: 5,009 sq. mi. Population: 1,709,242 (1940 census); 1,753,430 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE

UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Raymond E. Baldwin (Rep.), inaugurated in January, 1943, for a two-year term; Lieutenant Governor, William L. Hadden; Secretary of State, Mrs. Frances Burke Redick; Attorney General, Francis A. Pallotti.

See BIRTH CONTROL; SOCIALISM.

CONSCIENTIOUS OBJECTORS. See LAW under War Decisions; PRISONS; SELECTIVE SERVICE SYSTEM.

CONSCRIPTION. For Conscription in the United States, see DRAFT. For Conscription of Labor, see COMPULSORY LABOR. For Military Conscription in Foreign Countries, see AUSTRALIA, BRAZIL, CANADA, GERMANY, GREAT BRITAIN, ITALY, JAPAN, MEXICO, and NEW ZEALAND, under History.

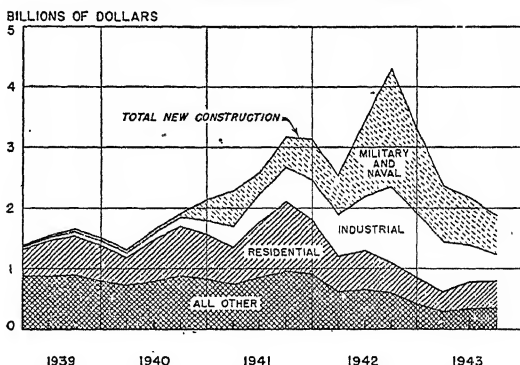
CONSERVATION, CONSERVATION ORDERS. See CIVILIAN DEFENSE, OFFICE OF; DEFENSE TRANSPORTATION, OFFICE OF; FISH AND WILDLIFE SERVICE; NATIONAL BUREAU OF STANDARDS; PETROLEUM ADMINISTRATION FOR WAR; WAR PRODUCTION BOARD.

CONSOLIDATED B-24, C-87, PB4Y, PB2Y, PB4Y. See AERONAUTICS under Types and American Transports.

CONSTELLATION (LOCKHEED C-69). See AERONAUTICS under American Transports.

CONSTRUCTION INDUSTRY. As a result of the initiative, energy, and speed which the construction industry exerted in meeting war emergency conditions, the peak of construction for war purposes has been passed, and there is a definite reduction of work and expenditures. This exceptional development in construction has included many and varied camps and barracks, munitions plants, manufacturing plants for war equipment and supplies, water supply and sanitation facilities for the troops, hangars, air fields and bases, roads, railways and freight yards, docks, shipbuilding yards, and innumerable other structures and facilities, great and small.

NEW U.S. CONSTRUCTION ACTIVITY



New construction in the United States for the first half of 1943 was 24 per cent below the figure for the first half of 1942, and 40 per cent below that for the second half of 1942. And this trend continues as the needs for war and defense become more fully met. Reduction of war construction work at home was begun in 1942 by the War Production Board, which proposed to limit the 1943 expenditures for this purpose to 60 per cent of that for 1942.

The grand total cost of all construction for the year 1943, as presented in the records compiled annually by *Engineering News-Record* was approximately \$5,000,000,000, as compared with \$11,500,000,000 in 1942. The original estimate for 1942 was \$12,821,000,000, but the lower figure covers corrections for contracts canceled and changes announced by the WPB after the estimates had been made. The classification of total construction expenditures for 1943, as shown by these records, and as estimated for 1944, is given in Table I.

TABLE I—VALUE OF U.S. CONSTRUCTION
(Add 000,000)

	1942	1943	1944
Grand total, all construction.....	\$12,821	\$5,000	\$3,500
Engineering construction.....	9,306	3,580	2,750
Classification of engineering construction			
Public buildings.....	5,678	1,850	1,150
Industrial buildings.....	200	175	175
Commercial buildings.....	292	227	200
Highways and streets.....	531	261	250
Earthwork and waterways.....	251	51	50
Bridges; public and private.....	50	26	25
Sewerage and treatment plants...	118	40	40
Waterworks and treatment plants	151	50	50
Unclassified; airports, air bases, shipbuilding yards, etc.....	2,035	900	810
Total engineering construction...	9,306	3,580	2,750

Under the spur of war emergencies the construction industry has initiated many new ideas and methods in order to expedite work. Concreting on roads (q.v.) and buildings in severe winter weather (even at 30 below zero) has been carried on successfully, while new equipment and new and modified methods have been developed in the construction of bridges (q.v.), large buildings, and other works. It is to be noted also, that the enormous increase in shipbuilding (q.v.) (from 1,000,000 tons in 1941 to about 20,000,000 in 1943 and about the same probably for 1944) were made possible by the entry of civil engineering personnel into the shipbuilding industry and the resultant application of new methods, new ideas, mass-production, and prefabricated assembly, which together have revolutionized established shipbuilding practice. One curious development has been the building of warships by men and organizations whose normal work has been in heavy civil-engineering construction.

Construction on both public works and private projects will be of vital importance during the postwar period; that is, from the cessation of fighting until the return to normal peacetime conditions. This industry will then form a vast reservoir of employment to absorb the men released from the fighting forces and auxiliaries and also those released (temporarily or permanently) from munition plants and other war activities. It has special advantages in that it will absorb men of varied capabilities: laborers, foremen, skilled and unskilled mechanics, surveyors, engineers (from field men to consultants), superintendents, office men, and others.

But to provide such employment, there must be work ready to be undertaken. And to have these projects ready when needed, it is imperative that preliminaries should be attended to in advance—definite surveys and plans prepared, estimates and drawings made, specifications written, necessary land or right-of-way acquired, legal matters disposed of, and complete arrangements made for financing. If these preparatory matters are deferred, they will require considerable time while men are waiting for or looking for employment, and contractors are waiting to sign contracts.

Two important aspects of these postwar develop-

ments are the character of the projects and the methods of financing. As to the first, the works to be constructed must be necessary and useful, not mere jobs for relief. The financing should be largely local, and free from the attitude of applying to the State and Federal governments for loans and grants. Most States and municipalities have programs more or less definite and complete, and more or less of a long-term character, and there will be also large and small private contracts, but a considerable number of these projects, of both classes, are still halting in their very early stages, and are vague as to details.

A report of the American Society of Civil Engineers pointed out that preparation of a nationwide construction program is essential, in advance of actual peace conditions. Refusal of Congress, in June, to provide funds for continuance of the National Resources Planning Board eliminated the proposed six-year program for postwar Federal public works. It is estimated that private enterprise, if not hampered by the Federal government, will go far to provide the necessary amount of employment. Labor organizations have been urged to use their influence in getting local works advanced to the point of readiness for contract letting.

Economists in the U.S. Department of Commerce estimated that a national annual income of \$150 billion will provide employment for 55,000,000 Americans who will want occupation after the war. And, furthermore, that such income would support an annual construction program of \$26 billion, including \$16 billion for local, State and Federal expenditures on roads, institutions, equipment, etc., and \$10 billion for building construction. The *Engineering News-Record* estimated 15 per cent of the above income (say \$22 billion) as the maximum available for total construction, and 66 per cent of this latter figure (say \$15 billion) for engineering construction. Its classified estimate, however, keeps within these maximum

TABLE II—VALUE OF POSTWAR CONSTRUCTION
(Add 000,000)

Water and sewerage.....	\$ 400 to \$ 600
Earthwork.....	300 to 500
Highways and bridges.....	1,000 to 2,000
Unclassified.....	1,500 to 2,000
Mass housing.....	2,500 to 4,000
Buildings; public, industrial, commercial	3,000 to 4,000
Total, civil engineering.....	8,700 to 13,100
Total, all construction.....	12,400 to 18,700

figures, the total annual expenditure on construction being set at \$12,400,000,000 to \$18,700,000,000, including the lighter kind of construction and housing. Of this total, \$8,700,000,000 to \$13,100,000,000 would be civil engineering construction, classed as shown in Table II. Other estimates of annual postwar construction totals range from \$14 billion to \$26 billion.

TABLE III—PROGRESS OF CONSTRUCTION VALUES
(Add 000,000)

Years	Total Construction	Civil Eng'g Construction
1933.....	\$ 2,440	\$1,068
1939.....	6,974	3,003
1940.....	8,510	3,987
1941.....	11,396	5,869
1942.....	11,500	8,000
1943.....	5,000	3,580
1944, Est.....	3,500	2,750

The change in value of construction work since 1939 is summarized in Table III. These figures emphasize the importance of the construction industry in the settling or leveling-off process of the postwar period.

See BRIDGES; BUILDING MATERIALS; FOUNDATIONS; NATIONAL HOUSING AGENCY; PORTS AND HARBORS; SHIPBUILDING.

E. E. RUSSELL TRATMAN.

CONSUMER GOODS. See BUSINESS REVIEW; LIVING COSTS. Compare CIVILIAN REQUIREMENTS.

CONSUMERS' COOPERATION. Data on the 1942 operations of consumers' cooperatives, as supplied by the U.S. Bureau of Labor Statistics, are shown in the accompanying table. For a fuller account of trends now apparent in the consumer-cooperative movement, see 1943 YEAR BOOK, pp. 173-176.

ESTIMATED MEMBERSHIP AND BUSINESS OF CONSUMERS' COOPERATIVES, 1942

Type of association	Estimated number of associations	Estimated membership	Estimated business
<i>Local associations</i>			
<i>Individuals</i>			
Retail distributive:			
Stores and buying clubs..	2,500	540,000	\$195,000,000
Petroleum associations...	1,400	650,000	197,000,000
Other distributive.....	50	19,000	7,500,000
Retail distributive departments of marketing associations.....	525	175,000	165,000,000
Service:			
Associations providing rooms and/or meals...	275	23,000	4,000,000
Housing.....	59	2,100	1,575,000
Medical care—			
On contract.....	30	100,000	1,600,000
Own facilities.....	11	15,000	1,150,000
Burial:			
Own facilities.....	35	25,000	260,000
Caskets only (burial on contract arrangement).....	6	2,500	10,000
Cold storage.....	50	25,500	925,000
Water.....	33	2,000	375,000
Printing and publishing..	16	75,000	475,000
Recreation.....	25	3,500	72,500
Miscellaneous.....	45	1,400	188,000
Electricity.....	850	1,210,000	35,000,000
Telephone.....	5,000	330,000	5,485,000
Credit unions.....	10,601	3,139,457	251,439,862
Insurance.....	2,000	10,000,000	185,000,000
<i>Affiliated associations</i>			
<i>Wholesale associations</i>			
Interregional.....	2	24	(^a)
Regional:			
Wholesale distribution... }	27	3,203	{ 116,250,000
Services.....			{ 1,607,000
Production.....			{ 12,503,000
Retail distribution..... }			{ 11,541,550
District:			
Wholesale distributive... }	11	150	{ 2,625,000
Services.....			{ 98,720

^a Impossible to estimate.

^b Not including production of separate subsidiary organizations.

CONTAINER DIVISION, CONTAINER RE-USE PROGRAM. See WAR PRODUCTION BOARD under *Conservation*; also under *Salvage*.

CONTRABAND. See FEDERAL BUREAU OF INVESTIGATION.

CONTRACTS, CONTRACT CANCELLATION, CONTRACT RENEGOTIATION. See under WAR CONTRACTS.

CONTROLLED MATERIALS PLAN (C.M.P.). See WAR PRODUCTION BOARD under *Balanced Production*; also BUSINESS REVIEW; MOTOR VEHICLES.

CONVOYS. See COAST GUARD; NAVAL PROGRESS.

COOPERATIVE MOVEMENT. See AGRICULTURAL COOPERATION; CONSUMERS' COOPERATION; SOCIETIES.

COORDINATOR OF INTER-AMERICAN AFFAIRS, Office of the. The Office of the Coordinator of Inter-American Affairs was created by Executive Order on Aug. 16, 1940, to coordinate the activities of governmental and private agencies in the inter-American field. At first, all activities were motivated by two considerations—the emergency aspect of hemisphere defense, and the long-term

aspect of sound economic development of the Western Hemisphere, all based on mutual understanding and cooperation.

After Pearl Harbor, and the war declarations, came the third emergency conference of the Ministers of Foreign Affairs of the American republics, at Rio de Janeiro. The resulting Rio Charter immediately became the blueprint for all inter-American activity, because it committed the 21 American republics to a program of vigorous cooperation in military affairs, control of subversive activities and Axis propaganda, health and sanitation, transportation, communications, education, and general economic development.

The 1943 operations of the Office of the Coordinator of Inter-American Affairs can be grouped, in general, into two broad categories—economic development, with attendant health, sanitation, and food programs, and informational activities. The Rio Charter visualized the well-being of all the peoples of this hemisphere as a fundamental goal and this is the chief concern of the basic economy program of the Coordinator's Office. Although this program sprang from the necessities of wartime development, in connection with the production of strategic materials and critical supplies for war purposes, it also aims to lay a basis for long-range benefits.

The basic economy program has three major objectives: safeguarding the health of United States military forces stationed in the other republics; maintaining conditions of health and food supplies for workers engaged in increasing production of strategic and critical materials; and maintaining economic stability in those countries whose economies have been dislocated by the war. During 1943, these objectives were carried out in three programs—health and sanitation, food supply, and emergency rehabilitation.

Health and sanitation work is developed jointly with the governments of the participating republics, and it includes disease control—particularly malaria—drinking water and sewage disposal projects, and educational programs for training nurses, health, and sanitation specialists. Control of malaria and other tropical diseases is a most urgent problem in connection with the production of strategic materials in tropical regions. To combat these deterrents to production, cooperative projects for the construction and maintenance of hospitals, dispensaries, and health centers have been organized. Health and sanitation agreements have been signed with 18 of the other American republics, among which the program in the Amazon Basin in connection with rubber production is representative.

The food supply program centers largely in regions where the war has made military concentration necessary, especially in the region of the Panama Canal. The drastic curtailment of transportation facilities, especially ocean shipping, has brought about serious localized shortages in some countries. Migration of workers to areas where production of strategic materials is in progress further aggravates the situation. Chief objective of the food supply program is to make those countries among our southern neighbors that face food shortages more self-sufficient by increasing both the variety and quantity of food production.

The primary purpose of economic development activities in the Office is to promote commercial relations and to assist in the maintenance of the basic economic stability of the Western Hemisphere. The blacklist of Axis business representatives, promotional work to increase the production of strategic materials, assistance in the elimination

of Axis interests in hemisphere air lines, are representative past accomplishments.

Such transportation problems as received special attention during 1943 were primarily directed toward assisting the other republics in their contribution to the United Nations war effort through accelerated movement of strategic materials to the United States. Somewhat typical of such projects is the Mexican Railway Mission. This program was undertaken to assist the Mexican government in strengthening its national railway system and to facilitate the handling of greatly increased tonnage of critical war materials. A technical mission of transportation specialists was sent to Mexico. This mission, in cooperation with Mexican transportation officials, has greatly speeded up the transportation of war supplies to the United States. All such projects are worked out in close cooperation with other governmental agencies, as well as with the governments of the other American republics concerned.

An important work during 1943 was the encouragement of an advertising program for newspapers, magazines, and radio in Latin America. The normal advertising income of these communication agencies has necessarily been curtailed by industrial conversion to war production in the United States and the curtailment of civilian exports. The cooperation of United States industry was enlisted in maintaining their advertising in the other countries, and 90 per cent of the 1,500 firms approached are cooperating in the program.

Administration of the inter-American training program was another phase of economic development work during 1943. This training program included industrial scholarships and fellowships, financed for one- or two-year periods by private industry in such representative fields as construction and roadbuilding, transportation, mining, food products, communication, power, commerce, finance, agriculture, and general manufacturing. This training administration also cooperates with the War and Navy Departments in training men from the other republics in military aviation and in naval activities. It administers a basic economy training program for workers and specialists who come to the United States for special training in such fields as medicine, public health, hospital administration, nursing, sanitary engineering, and the biological sciences.

The informational activities of the Office concentrate on the exchange of all types of knowledge and information that will aid mutual understanding and unity among the republics of the Western Hemisphere. Radio, the press, magazines, motion pictures, and educational projects are the chief media used. Supplementing the regular commercial services in their specialized fields, the information division gives wide distribution to news of inter-American significance, articles, news-pictures, posters, display placards, and pamphlets. The Office also publishes an illustrated magazine, *En Guardia*, in Spanish and Portuguese for distribution to a selected list of more than 500,000 subscribers in the other Americas. *En Guardia* is also published in a quarterly edition in French, for distribution in Haiti. Pamphlets are published in Spanish, Portuguese, and English on a wide variety of significant hemisphere subjects. An illustrated booklet series on the other American republics has achieved a wide reader interest throughout the United States.

In radio, the coverage is equally complete. During 1943, the people of Latin America could listen for approximately eight hours each day to broadcasts of an inter-American nature in Spanish, Por-

tuguese, or English. Besides news broadcasts, for which a special inter-American news report is provided on a 24-hour daily, seven-days-a-week basis, other programs are broadcast or transcribed for re-broadcast over local stations. These include special events, important speeches, anniversary programs, interviews with visitors from other countries, as well as dramatic programs. More than a score of these programs are serial in nature. Domestic networks and stations have cooperated with this Office in broadcasting programs which give the people of the United States a better understanding of their southern neighbors. Special scripts dealing with the history, culture, resources, and war activities of the other Americas were furnished weekly during 1943 to more than 500 domestic radio stations. The net result of all this is that dozens of radio programs, dramatizing the progress of the war as it involves the Western Hemisphere, as well as programs of historical and cultural significance to all the American republics, are "on the air" today.

Motion pictures have been widely used to carry the message of hemisphere solidarity to millions throughout the Americas. Distribution is made through regular commercial channels, as well as through private organizations, schools, clubs, and churches. Newsreels in Spanish and Portuguese are released weekly. The program of production and distribution of 16 mm. nontheatrical films, mostly educational and documentary in nature, was greatly furthered during 1943. Subjects included war production, resources and culture of the United States, health programs, agriculture, transportation, industry, and postwar topics. For distribution in the United States, film subjects include materials on the history, customs, resources, and war activities of the other republics.

Among the information projects during 1943 were the tours of some 90 leading newspaper publishers, writers, and editors from Latin America, who came in small groups of from 3 to 10 at the invitation of the National Press Club. These journalists made conducted circle tours of the United States, personally inspecting United States war activities, military camps, cities and agricultural regions, medical centers, libraries, and educational institutions. They also had many opportunities to interview governmental, industrial, and professional leaders.

The educational projects of this Office strive to unite hemisphere educators in a solid program of collaboration in educational matters, so that all will join in the study of the individual republics, their culture, their history, their resources, their peoples, and their needs. The first conference of ministers of education of the American republics and the inauguration of the Inter-American University—both of which events took place in Panama City in September, 1943—perhaps are indicative of the trend in educational cooperation.

During 1943, the Inter-American Educational Foundation was organized by the Coordinator's Office to develop a comprehensive cooperative educational program with the other American republics. This program will be directed at elementary and secondary school levels, teacher training institutions, and the reduction of adult illiteracy. The basis of cooperation will be through the ministries of education and existing educational organizations. Reciprocal agreements will call for joint contributions of funds, materials, and educational specialists. Development of inter-American teaching materials, construction of curricula, vocational, agricultural, and health education, and the training

of teachers in Western Hemisphere languages are fundamental to the program. In languages, which are absolutely essential for any and all inter-American understanding, much has already been accomplished. The great increase in the study of Spanish and Portuguese in the United States during 1943 was equalled only by the interest in the other Americas in the study of English.

Other activities include inter-American demonstration centers, consultant services to teachers and schools, the preparation and distribution of teaching aids, inter-American institutes and lecture series on inter-American affairs in colleges, and universities, a national discussion contest on inter-American topics, inter-American workshops in summer schools, development of inter-American materials to supplement textbooks, and the exchange of students and educators among the American republics through scholarships and invitational travel fellowships.

Closely related to educational activities is the wide and varied work of the Division of Inter-American Activities in the United States. This work assumes that effective cooperation among the republics is dependent upon mutual understanding among the people themselves, and that such understanding can only be founded on informed public opinion. The major function of this program is to encourage the active participation of community groups and organizations in affairs of inter-American import and significance, and to make available to such groups and to interested individuals reliable informational materials—pamphlets, motion pictures, speakers, graphic materials, and exhibits.

NELSON A. ROCKEFELLER.

COOTIES. See INSECT PESTS.

COPPER. Severe restrictions on use, reduced consumption for the manufacture of certain types of ammunition, and maintenance of mine production combined in 1943 to take copper out of the severe shortage classification and into near balance with requirements. Even essential civilian industry adopted a patch-and-pray policy in order that vast tonnages could be available for production of brass and bronze so vital to ordnance and other war material. Utilities, for instance, cut their consumption of wire, cable, and bus bar 72 per cent by value from 1940 levels, and salvaged from plant seven-eighths of this remaining consumption.

The controlling factor in copper consumption in 1943, as in any war year, was the war machine's appetite for brass and bronze, the former typically composed 70 per cent of copper, the latter as much as 90 per cent. An ambitious program to substitute steel cartridge cases for brass was halted December 1, the steel cases never having proved entirely satisfactory. Balancing this renewed demand in 1944 will be quantities made available by sharp curtailment of small arms ammunition manufacture. If the supply-demand relationship of copper continues to improve, there is prospect that other changes will be made in war products shifted away from copper, such as marine fittings. Severe restrictions upon copper for any purely civilian use were continued by the War Production Board throughout 1943 and show no signs of lessening. Any surplus of production over urgent requirements is being placed in a government stockpile, now variously estimated to total from 200,000 to 400,000 tons.

Frantic efforts to stimulate new domestic production definitely slowed down toward the end of

the year, however, WPB announcing that no more applications for special premium prices would be accepted after December 31 because of "successful efforts towards balancing the copper supply with requirements of the armed services and the most essential civilian uses." This meant that individual mines no longer could apply for production quotas to be set, above which the government would pay them a price premium of at least five cents per lb.—and in certain cases as much as 14½ cents per lb.—above the market price of 12 cents. This system, known as the Premium Price Plan had been in effect since February, 1942, for copper, lead, and zinc mines. Until the spring of 1943, only the 5-cent premium was available to copper mines. The 14½-cent premium then was announced to enable reopening of high-cost mines and the development of low grade ore reserves. More than 2,000 quotas have been assigned to copper, lead, and zinc mines by a committee including representatives of the War Production Board and Office of Price Administration, and these will remain in effect even though newcomers will be turned away. Premium prices have been paid, generally, only for production in excess of 1941 levels; therefore, most copper production has been made without benefit of premium price, only the marginal output reaping this added reward.

Arizona is conceded to have produced more copper than any other State in 1943, the big Morenci open-pit mine of Phelps-Dodge Copper Corp. turning in its first full year's production. The output of Utah Copper Co., whose mammoth Bingham Canyon operations are the country's largest, undoubtedly made Utah a strong second. Anaconda pushed Montana up to third place, and New Mexico, Nevada, and Michigan produced substantial tonnages. United States production was supplemented materially by imports from Chile, the largest Latin American contributor, with a steady flow from Peru and Mexico. One Mexican project, the Gran Cananea just south of the United States border in Sonora, will not come into production until well into 1944. Operated by an Anaconda subsidiary, the \$15,000,000 project will exploit a large body of low-grade ore, and will count as a major producer.

UNITED STATES COPPER—1943
(United States Copper Association)
(In tons of 2,000 lb.)

	PRODUCTION	
	Mine or Smelter and scrap	Refined
1943.....	1,194,565	1,206,871
1942.....	1,152,344	1,135,708
1941.....	1,016,996	1,065,667
1940.....	992,293	1,033,710
1939.....	836,074	818,289
1938.....	644,869	638,076
	CONSUMPTION	
	Copper industry invoicings	Net domestic consumption *
1943.....	1,216,651	1,701,753
1942.....	1,142,718	1,517,983
1941.....	1,108,770	1,577,765
1940.....	1,003,581	959,607
1939.....	760,377	793,399
1938.....	508,005	526,743

* Includes deliveries on duty paid foreign copper.

The principal limiting factor on mine output in 1943 was lack of labor. Concentrated recruiting campaigns by the War Manpower Commission, in which mining was given top priority over all other industry in referral of job applicants west of the Mississippi, were barren in result, and the same final desperate remedy that was applied in 1942

was repeated in 1943—the release of soldiers with mining experience to work in the mines. More than 4,500 soldiers were released in September to molybdenum, copper, and zinc mines.

Fired cartridge cases, undesirable for many uses because of acquired impurities, will serve as the base material from which pennies will be minted in 1944, the zinc-coated steel penny inaugurated in 1943 having failed to catch popular fancy.

The Copper Recovery Corp. (see 1943 YEAR BOOK) was dissolved in December, its work having been completed.

Unique from a technical standpoint was the use of a steel mill owned by Weirton Steel Co., Weirton, Pa., to roll brass strip and a steel mill owned by Acme Steel Co., Chicago, to roll gilding metal (97 per cent copper, 3 per cent zinc) strip.

See BERYLLIUM; WAR PRODUCTION BOARD under *Balanced Production*.

CHARLES T. POST.

COPYRIGHT. Registrations for the fiscal year 1942-43, according to the report of the U.S. Register of Copyrights, numbered 160,789, as compared with 182,232 for the preceding year. Of these 40,457 were classed as books, but included pamphlets, leaflets, and contributions in periodicals. Those printed in the United States numbered 39,784, those printed abroad in a foreign language, 156, while the remainder, 517, were English books registered for ad interim copyright. The chief classes of the remaining registration were: Periodicals (numbers), 42,995; musical compositions, 48,348; dramatic or dramatico-musical compositions, 3,681; works of art, models, or designs, 1,649; drawings or plastic works of a scientific or technical character, 1,911; photographs, 1,042; prints and pictorial illustrations, 2,317; maps, 737; lectures, sermons, addresses, 629; motion pictures not photoplays, 1,074; motion-picture photoplays, 693; reproductions of works of art, 221. The renewals numbered 9,650 as compared with 11,488 in the preceding year. The fees applied during the year amounted to \$306,836. The total number of separate articles deposited during the fiscal year ended June 30, 1943, was 252,123. The gross receipts of the Register's office for the fiscal year were \$324,300, the total expenditures for salaries, \$282,462, and for supplies, \$2,549. See PATENT OFFICE, U.S.

CORN. Corn production in the United States in 1943 was estimated by the U.S. Department of Agriculture at 3,076,159,000 bu., the second largest yield on record, and compared with the 1942 record crop of 3,131,518,000 bu. and the 1932-41 average of 2,349,267,000 bu. The total acreage harvested, largest since 1937, was placed at 94,790,000 acres compared with 89,021,000 acres in 1942 and the annual average of 94,511,000 for the 10 years 1932-41.

The average yield per harvested acre of 32.5 bu. of grain was exceeded in the 77 years of record only by the 1942 acre yield of 35.2 bu. and compared with the 10-year average of 24.9 bu. Hybrid seed, an important factor in raising the average yield per acre during recent years, was planted in more than half of the corn acreage. Most of the Corn Belt States planted better than 90 per cent of their acreage with hybrid corn, while the planting of hybrid in surrounding States and in other parts of the northern half of the country showed substantial gain.

The corn harvested for grain was estimated at 2,759,080,000 bu., the 4,370,000 acres harvested for silage produced 35,028,000 tons of silage, and

the remainder of the crop, about 6,286,000 acres, was harvested for forage or grazed by livestock. The season average price per bushel (preliminary) received by farmers was \$1.122 in 1943 and the

State	Value	Acres Harvested	Production (bushels)
Iowa.....	\$640,740,000	10,860,000	640,740,000
Ill.....	447,930,000	8,532,000	426,600,000
Ind.....	229,343,000	4,294,000	210,406,000
Neb.....	218,798,000	8,332,000	216,632,000
Minn.....	213,313,000	5,192,000	215,648,000
Ohio.....	191,446,000	3,516,000	174,042,000
Mo.....	163,578,000	4,510,000	139,810,000
Wis.....	121,995,000	2,504,000	108,924,000
Texas.....	102,583,000	5,526,000	88,416,000
Ky.....	99,462,000	2,740,000	75,350,000
Kan.....	95,279,000	3,666,000	84,318,000
Tenn.....	91,690,000	2,868,000	65,964,000
N.C.....	78,568,000	2,319,000	51,018,000
Ala.....	76,161,000	3,234,000	48,510,000
Penn.....	65,890,000	1,294,000	49,172,000
Miss.....	64,392,000	2,807,000	43,508,000
Mich.....	61,369,000	1,556,000	52,904,000

value of production was estimated at \$3,451,337,000 versus 91.7¢ and \$2,871,400,000 in 1942. The accompanying table lists the leading States in the production of corn for 1943. See CHEMISTRY under *Alcohols* and *Proteins*; INSECT PESTS.

CORPORATION INCOME, REORGANIZATION, TAXATION. See BUSINESS REVIEW; TAXATION.

CORSICA. A French island department in the Mediterranean, 100 miles southeast of Nice. Area, 3,367 square miles. Population (1936), 322,854. Chief towns: Ajaccio (capital) 38,000 inhabitants; Bastia, 52,208.

History. The French authorities in Corsica adhered to Marshal Pétain's Vichy regime following his capitulation to Germany in 1940. Four days after the Anglo-American landings in French North Africa on Nov. 8, 1942, Italian and German troops landed and occupied the island. Soon afterward anti-Axis patriots secretly commenced the organization of a national front of resistance, which received arms from the French High Command in North Africa. When the Italian Government surrendered to the Allies on Sept. 9, 1943, the patriot army seized control of Ajaccio and many other centers and ousted the Vichy authorities in favor of a prefectural council. This council was succeeded on September 14 by a prefect and a military commander appointed by the French Committee of National Liberation in Algiers.

The Italian garrison of some 70,000 men made little or no effort to interfere with these developments. However there were in Corsica at the time of the uprising about 10,000 German troops—3,000 in the permanent garrison and 7,000 retiring across Corsica from Sardinia to the Italian mainland. The German troops sought to crush the revolt and recapture the capital. However they were defeated and driven from the island in a short campaign (September 9–October 1) by the French patriot army aided by French and American troops landed from North Africa. Corsica was then converted into a base of operations for Allied forces. See WORLD WAR.

COSMETICS. See FASHION EVENTS.

COSTA RICA. A Central American republic. Capital, San José.

Area and Population. Area, 23,000 square miles; estimated population, 687,354 in 1942. The people are largely of Spanish and other European descent, except for some 18,000 Negroes in the Atlantic

banana zone and about 3,500 aboriginal Indians. Estimated populations of the chief towns as of Jan. 1, 1941: San José, 76,178; Cartago, 21,709; Limón, 17,065; Alajuela, 12,541; Heredia, 10,397; Puntarenas, 8,920. Living births in 1941, 28,823; deaths, 11,429.

Defense. As of Jan. 1, 1941, Costa Rica had an active army of 548 men (220 musicians) and trained reserves of 200. A decree of July 6, 1940, established the National Police Corps, with both police and military duties. By an agreement signed July 14, 1941, Costa Rica engaged a U.S. military mission to supervise the training of the republic's small but expanding army. Under a lend-lease agreement signed Jan. 16, 1942, the U.S. Government undertook to supply arms and equipment to the estimated value of \$550,000. A squadron of U.S. army patrol planes was stationed at La Sabana airport near San José. The Costa Rican Government had one customs patrol launch in the Pacific and another in the Atlantic.

Education and Religion. The illiteracy rate is among the lowest in Latin America. On May 1, 1942, there were 697 schools of all kinds, with 73,320 pupils. There were 2 secondary schools, with 1,464 students; a normal school, with 550 students; and 2 colleges (at Alajuela and Cartago). The National University at San José was reopened in 1941. Roman Catholicism is the state religion, but the Constitution guarantees complete religious liberty.

Production. Agriculture is the chief occupation, with coffee, bananas, and cocoa accounting for nearly 90 per cent of all exports in 1941. The 1941-42 coffee crop was 24,618,912 kilos (of 2.2 lb.) and exports 344,535 bags (of 60 kilos). Banana exports in 1942 were 2,209,236 stems (4,922,924 in 1941); cocoa, 5,523,078 kilos in 1942 (5,688,434 in 1941). Corn, beans, rice, tobacco, sugar, potatoes, fruits, and other vegetables are grown mainly for home consumption. The 1940 census showed 331,142 head of cattle. Gold and silver mining is important on the Pacific slope. The forests yield cedar, balsa wood, and hardwoods. There was a marked expansion of balsa production for war purposes in 1942 and 1943. Manufacturing is confined to cigars, cigarettes, furniture, candles, cheese, and a few other products.

Foreign Trade. Including bullion and specie, merchandise imports in 1942 totaled about 68,928,000 colones (99,800,983 in 1941); exports, 68,928,000 colones (56,398,772 in 1941). The United States supplied 81 per cent of all 1941 imports and took 81 per cent of all exports.

Finance. According to the President's message of May 1, 1942, actual revenue receipts in 1941 were 42,602,500 colones and expenditures 47,393,500 colones. In 1942 receipts and expenditures were 36,918,078 and 48,513,205 colones respectively.

Public debt on Dec. 31, 1941: 149,195,010 colones (foreign, 105,175,023; internal, 44,019,987). The colon remained pegged to the U.S. dollar at 1 colon equals \$0.1779 (official rate) during 1941, 1942, and 1943.

Transportation. In 1942 Costa Rica had 413 miles of railway line, 448 miles of improved highways, and a domestic air network connecting with the Pan American Airways system. The chief ports are Limón on the Caribbean and Puntarenas on the Pacific. On Jan. 16, 1942, the U.S. Export-Import Bank agreed to contribute \$5,000,000 and the Costa Rican Government \$2,500,000 for completion of the Costa Rican section of the Pan American Highway. The following July the U.S. Government decided to construct at its own expense a pioneer military highway along the same route. Work on

both projects was pressed forward in 1942 and 1943.

Government. Executive power is vested in a president elected by direct vote for four years and legislative power in a Congress of 44 members, half of whom are elected (for four years) every two years. President in 1943, Dr. Rafael Angel Calderón Guardia, who assumed office May 8, 1940. Costa Rica declared a state of war with Japan on Dec. 8, 1941, and with Germany and Italy Dec. 11, 1941.

HISTORY

U.S. Relations. The close political, economic, and military collaboration between Costa Rica and the United States established during previous years was extended during 1943. Vice President Henry Wallace received an enthusiastic welcome when he visited Costa Rica on March 18-21 during his Latin American tour. On March 19 he inaugurated the first field office of the Inter-American Institute of Agricultural Sciences at Turrialba, near San José, a site selected by the Governing Board of the Pan American Union in 1942 (see 1943 YEAR BOOK, p. 525). Wallace, who first espoused the establishment of the Institute while U.S. Secretary of Agriculture in 1935, said that the Turrialba station's research on tropical agriculture, combined with the coordinating activities of the Institute, could change the course of life in the Western Hemisphere within one generation.

In April a mission of U.S. quinine and forestry specialists was appointed to work with Costa Rican authorities in selecting sites for cinchona plantations. The Costa Rican Government agreed to set aside up to 10,000 acres for planting with cinchona seeds brought from the Philippine Islands. Steady progress was made in the development of the U.S.-Costa Rican agreement of 1941 for the establishment of a self-sustaining rubber-culture industry in Costa Rica. An exchange of notes on Apr. 3, 1943, expanded and clarified the original agreement. Shipments of wild rubber from Costa Rica by the U.S. Rubber Development Corp. in March increased to 85,005 lb. The highway-construction and food-production programs launched in 1942 with U.S. financial and technical aid likewise were carried forward (see 1943 YEAR BOOK, p. 180, for these agreements). They helped to sustain full employment and relative prosperity. In line with the increased contacts between the two republics, the U.S. and Costa Rican Governments in May elevated their legations in San José and Washington to the rank of embassies.

Axis Properties Sold. There was little trouble with pro-Axis elements in Costa Rica in 1943 as a result of the measures taken against them the previous year. In February, 1943, the Government announced its decision to sell at auction the agricultural machinery of Japanese arrested at the outbreak of war and subsequently interned in the United States. Valuable German-owned plantations were subsequently auctioned off under the law authorizing expropriation of property held by Axis nationals.

Political Developments. With a Presidential election due early in 1944, political interest centered on the selection of candidates by the rival political parties. Former President Leon Cortés Castro, a strong critic of President Calderón Guardia's National Republican administration, early entered the race. The National Republicans selected as their candidate Teodoro Picado, President of Congress, who was named first designate for the Presidency July 16 upon the death of the incumbent, Dr. Rafael Calderón Muñoz.

In September the new Popular Vanguard party made a compact with the National Republicans to support Picado's candidacy and the social legislation of President Calderón Guardia, to aid the democracies in the war, and to fight totalitarianism in Costa Rica. In June Archbishop Victor Sanabria, head of the Roman Catholic hierarchy in Costa Rica, authorized Catholic workers to affiliate with the Popular Vanguard, which included former members of the Communist party, liberals, and other groups. The Archbishop forbade Catholics to join Nazi or Fascist organizations.

At the request of President Calderón Guardia, a constitutional amendment providing basic guarantees for workers was approved by Congress. On August 20, Congress also passed a social security law submitted by the President, providing for free medical services, old-age pensions, etc. The law went into effect September 15, despite vigorous opposition from conservative business interests. A decree of August 10 authorized a bond issue of 400,000 colones for the establishment of a national fishing industry. The same decree authorized various measures for the encouragement of the stock-raising industry, including the establishment of an agricultural and livestock experimental station.

Legislation to protect and encourage production of basic foods was enacted November 6. On December 28 Congress passed a bill abolishing all restrictions against Chinese immigration. Costa Rica was thus the first Latin American republic to repeal Chinese exclusion laws.

Friction with Guatemala. Costa Rica's action in enacting basic labor guarantees and an advanced social security law aroused bitter criticism in the dictator-controlled press of neighboring Guatemala. Both the President of Costa Rica and Archbishop Sanabria were denounced as "Communists" for supporting this legislation. Archbishop Sanabria on December 24 announced that the Guatemalan Minister to Costa Rica had refused to issue a visa permitting him to attend a Eucharistic Congress in Guatemala as the Costa Rican delegate.

See DAMS; LABOR CONDITIONS under *Labor Movements*; SPANISH-AMERICAN LITERATURES; WORLD WAR.

COST OF LIVING. See LIVING COSTS. For *Cost-of-Living Bonuses*, see LABOR CONDITIONS under *Wages*.

COTTON. The 1943 cotton crop of the United States was estimated at 11,478,000 bales of 500 lb. gross weight as of Dec. 1, 1943. This compares with 12,817,000 bales in 1942 and a 10-year (1932-41) average of 12,474,000 bales. The indicated quality of the 1943 crop will average higher in grade but shorter in staple than in the two preceding years. The grade index of the 1943 crop probably will be higher than the record low indexes for the 1942 and 1941 crops but it will be lower than average. On the other hand the staple length of the current crop is expected to average shorter than that for any other year since 1939 and longer than any crop on record prior to 1938. Cotton farmers received the highest prices in many years for the 1943 crop but total returns from marketings may be slightly smaller than the \$1,426,000,000 returns from lint and seed in the previous season. Returns for the 1942 season were the highest since 1929.

The acreage of cotton in cultivation on July 1, 1943, totaled 22,151,000 acres. The production goal for 1944 is 22,277,000 acres. These figures compare with the 1942 acreage of 23,302,000 acres

and the 10-year average of 29,508,000 acres. Harvested acreage in 1943 totaled 21,874,000 acres against 22,602,000 in the previous season and a 10-year average of 27,718,000 acres.

Growing conditions in 1943 were unusually favorable at the beginning of the season with better than average stands and with weather sufficiently dry and hot to reduce the threat of heavy weevil damage. Continued drought and excessive heat throughout August and early September, however, resulted in considerable deterioration of the crop especially in Tennessee, Arkansas, Oklahoma, and Texas. The average yield per acre in 1943 was approximately 252 lb. against 272 in 1942 and the 10-year average of 217.

Table 1 shows the production of cotton in 500-pound gross weight bales for 1943 (estimate as of Dec. 1, 1943), 1942, and the average for the 10 years 1932-41.

TABLE 1.—PRODUCTION OF COTTON IN THE UNITED STATES, BY STATES
[Crop Reporting Board, Bureau of Agricultural Economics]

State	Average 1932-41	1942	1943 crop (Dec. 1 est.)
			(Thousands of Bales)
Missouri.....	333	417	295
Virginia.....	29	34	25
North Carolina.....	606	727	595
South Carolina.....	760	699	695
Georgia.....	997	855	850
Florida.....	25	16	17
Tennessee.....	479	625	490
Alabama.....	1,014	925	955
Mississippi.....	1,530	1,968	1,840
Arkansas.....	1,298	1,485	1,110
Louisiana.....	618	593	735
Oklahoma.....	691	708	385
Texas.....	3,419	3,038	2,860
New Mexico.....	104	111	111
Arizona.....	170	193	139
California.....	384	402	360
All Other.....	18	21	16
United States.....	12,474	12,817	11,478
Sea Island ¹	2.7	0.8	0.3
Amer. Egypt. U.S. ¹	22.5	75.3	68.3
Texas ¹.....	...	10.1	16.0
New Mexico ¹.....	...	8.7	11.0
Arizona ¹	20.4	56.0	41.0
California ¹.....	...	0.5	0.3

¹Included in State and United States totals. ²Short-time average.

Some of the outstanding features of the quality of upland cotton from the 1943 crop as compared with the two preceding crops were (1) a substantial increase in the proportion of Strict Middling and higher grade cotton; (2) a decrease in the proportion of grades below Strict Low Middling; (3) a sharp increase in the production of $1\frac{3}{16}$ " and shorter staple; (4) a substantial decrease in the proportion of staples $1\frac{1}{16}$ " and longer.

Cottonseed production in 1943 is estimated at 5,116,000 tons against 5,717,000 tons in 1942 and a 10-year (1932-41) average of 5,549,000. Of the 1943 production of cottonseed approximately 4,000,000 tons probably will be crushed by cottonseed oil mills and the remainder will be retained on farms for planting, livestock feed, etc. This compares with 4,498,000 tons crushed in 1942 and the 10-year average of 4,400,000 tons crushed. The production of cottonseed products from the 1943 crop is expected to approximate 1,200,000,000 lb. of cottonseed oil, 1,860,000 tons of cottonseed meal and cake, 940,000 tons of hulls, and 1,200,000 bales of linters. These products of cottonseed have assumed new importance because of the great need for additional vegetable oils, and high protein livestock feed. The demand for cottonseed oil for use in shortening compounds, oleomargarine,

etc., and for cottonseed meal and cake for livestock feed greatly exceeds supplies. Cotton linters is an important source of chemical cellulose for the production of gunpowder, rayon, photographic films, etc. Cottonseed hulls are used for livestock feed and as raw material for the production of strategic chemicals.

The carry-over of cotton in the United States on Aug. 1, 1943, totaled 10,656,952 bales or slightly more than the previous season, but 2,375,561 bales smaller than the record high carry-over of 13,032,513 bales on Aug. 1, 1939. The quality of the 1943 carry-over of upland cotton was one of the lowest on record with a grade index of 93.0 and an average staple length of 30.9 thirty-seconds inch.

The 1943-44 supply of Strict Middling and higher grade cotton will be about 25 per cent more than last season; Middling 13 per cent less; Strict Low Middling 4 per cent less; and Low Middling and lower 5 per cent less. These grades include White and Extra White and approximately equivalent grades of colored cotton. The substantial increase in the 1943 production of Strict Middling and higher grade cotton will help to replenish stocks of these qualities which were reduced to an unusually low level at the beginning of the 1943 season.

The 1943-44 supply of $2\frac{3}{32}$ " and shorter cotton is about 4 per cent more than last season; $1\frac{1}{16}$ " through 1" about 4 per cent less; $1\frac{1}{32}$ " through $1\frac{3}{32}$ ", 13 per cent less; and $1\frac{1}{8}$ " and longer 10 per cent less.

The domestic consumption of cotton in the United States during the 1943-44 season will probably total about 10,300,000 bales or 900,000 bales less than indicated production in terms of running bales. Domestic consumption for 1943-44 is expected to be smaller than the record consumption of over 11,000,000 bales in the two preceding years mainly because of difficulties in maintaining an adequate force of experienced employees in cotton mills. There is an adequate supply of cotton for the maintenance of production at last season's high level and apparently sufficient manufacturing equipment. There is also a civilian and military demand sufficient to absorb the output of textile mills at an annual rate of at least the 11,000,000 bales during the 1943-44 season although military demands will probably total somewhat less than the previous season. On some types of goods mills contend that cloth prices are not adequate to cover manufacturing costs although the levels of cotton prices during the first few months of the 1943 season were slightly below those in the previous season.

Mill margins for 17 constructions of coarse and medium cloths averaged 20.68 cents during the 5 months August through December, 1943, against 20.63 cents during the 1942-43 season and a 5-year (1937-41) average of 14.43 cents. These margins indicate in a general way the relationship between cotton and cloth prices and it is claimed that much of the increase in the level of margins during recent years has been absorbed by increased wages and other manufacturing costs.

Action was taken to stabilize cotton prices on Apr. 24, 1943, by sales of Commodity Credit Corporation stocks at a price of 21.75 cents for Middling $1\frac{1}{16}$ " in "Group B mill point" areas with specified differentials for other locations and for other grades and staples. This price has been changed from time to time in line with legislation prohibiting sales of cotton at prices lower than parity. Through January, 1944, however, cotton

prices averaged well below the level of the Commodity Credit Corporation sales prices. The Commodity Credit Corporation is required by law to make loans to farmers on cotton at 90 per cent of July parity. The parity price of cotton, which is computed by multiplying the average price of cotton in the 1909-14 period (12.4 cents per pound) by the index of prices paid by farmers, including interest and taxes, was 20.46 cents per pound on July 15, 1943, and 20.96 cents on Dec. 15, 1943. Farm prices of cotton averaged a little less than parity during the first half of the 1943-44 season.

Foreign cotton (commercial) production has decreased considerably in recent years. Production is estimated at 13,850,000 bales for 1942—the lowest since 1934. This compares with 15,573,000 bales in 1941 and a record high of 18,354,000 in 1936. Complete data are not available for 1943 but indications are that production will be smaller in Egypt and a good many other countries than in 1942. The 1943 Indian cotton acreage is smaller than in 1942 but higher yields are expected to result in about the same production in 1943 as in 1942. Production, however, may be larger in Brazil, Argentina, Mexico, Uganda, and a few other countries. Stocks of foreign cotton on Aug. 1, 1943, were estimated at about 12,500,000 bales—the largest carry-over on record. The carry-over on Aug. 1, 1942, was estimated at 11,400,000 bales and on Aug. 1, 1939, at 7,501,000. See JAPAN under *History*; TEXTILES.

CARL H. ROBINSON.

COURT GAMES. Indoor court games were confined almost entirely to charity exhibitions in the 1942-43 season. With most of the players in the service, competition in racquets was nil, and the only court tennis event of note was a match held in New York for the Red Cross in which Pierre Etchebaster of New York, world champion, singly defeated the amateur doubles team of W. A. W. Stewart, Jr., and Charles Devens, 8-2, 8-4, despite a heavy handicap allowed his rivals. Joe Lordi of the New York A.C., former U.S. titleholder, won the Red Cross tourney held by the National Squash Tennis Association at the Yale Club in New York.

Competition in squash racquets was a bit livelier, with H. Sherman Howes of Boston triumphing in the national invitation tourney held on the University Club courts in New York, while the veterans' final went to A. H. Sonnabend of Boston. Members of the American and Canadian armed forces met in a team match, with the former winning, 7-2. John C. Holt of Yale won the intercollegiate title and Canada took the Lapham Trophy by defeating a U.S. team at Montreal. H. W. Pell of the Princeton Club annexed the New York State honors.

THOMAS V. HANEY.

COURT MARTIAL. See LAW; PRISONS; UNITED STATES under *Enactments*.

COURTS. See JUVENILE DELINQUENCY; LAW. For decisions, see also the subject.

CRAMER CASE. See LAW under *War Decisions*.

CRANBROOK FOUNDATION. See PHILANTHROPY.

CREDIT CONDITIONS, CREDIT CONTROL. See BANKS AND BANKING.

CREDIT UNIONS. See CONSUMERS' COOPERATION.

CRETE. A mountainous island in the eastern Mediterranean, forming the most southerly part of Greece. It is 160 miles long and from 6 to 35 miles wide. Area, 3,235 square miles; population, 386,427 on Jan. 1, 1939. Chief towns: Canea, the capital, 26,604 inhabitants; Candia, 33,404; Rethymnon, 8,632.

There are good harbors along the northern shore, particularly at Suda Bay, but the south shore has no satisfactory ports. See GREECE under *History*.

CRIME, CRIME CONTROL. See FEDERAL BUREAU OF INVESTIGATION; JUVENILE DELINQUENCY; LAW; PRISONS.

CRITICAL MATERIALS AND COMPONENTS. See WAR PRODUCTION BOARD; also under STRATEGIC. For **Critical Occupations**, see WAR MANPOWER COMMISSION.

CROATIA. See YUGOSLAVIA.

CROMWELL DIVORCE CASE. See LAW.

CROP PRODUCTION. See AGRICULTURE; articles on leading crops; countries under *Production*.

CROSS-COUNTRY RUNNING. If one man could be picked as the star of cross-country running for last season the honor probably would have to go to the veteran Dartmouth harrier, Don Burnham. Don, a consistent scorer all year, won the Inter-collegiate A.A.A.A. title to pace his team to victory and helped the Hanoverians win the Heptagonal Association crown, although in that race he did finish second to Arthur Truxes, West Point yearling.

The National A.A.U. senior laurels were won by Bill Hulse of the New York A.C., the team title being won by the Naval Academy. Clayton Farrar of the Millrose A.A. took the Metropolitan A.A.U. senior crown to help his club capture the team championship in that competition.

Sergeant Gerard Cote of the Canadian Army scored a marathon double. Cote, who won both the Boston and Yonkers races in 1940, duplicated that feat by winning the National A.A.U. marathon held at Yonkers following his great victory in the Boston run last spring.

THOMAS V. HANEY.

CRYMO-THERAPY or CRYMO ANESTHESIA. See MEDICINE.

CUBA. An island republic in the West Indies. Capital, Havana (Habana).

Area and Population. Area, 44,164 square miles; population at the census of 1943, 4,777,284. About one-half of the inhabitants may be classified as whites, one-fourth as mulattoes, and one-fourth as Negroes. The 1931 census showed 613,970 Spaniards. As of Jan. 1, 1941, there were 5,531 U.S. citizens residing in Cuba. Estimated populations of the chief cities: Havana, 728,197 (with suburbs); Camaguey, 137,893; Santiago de Cuba, 106,860; Santa Clara, 99,363; Matanzas, 72,481. Incomplete registration statistics showed 78,310 living births and 43,168 deaths in 1941.

Defense. By the decree of Mar. 10, 1942, able-bodied men between 20 and 50 years of age were obliged to register for compulsory military training for a basic period of one year (see 1943 YEAR BOOK, p. 184). Enlistment of Cubans and foreigners between 20 and 35 years of age for voluntary service overseas began Nov. 16, 1942. This program resulted during 1942 and 1943 in a considerable expansion of the defense establishment existing prior to Cuba's entrance into the war (see *History* below).

In a lend-lease agreement signed in November, 1941, the U.S. Government undertook to supply Cuba with military, naval, and air equipment to the value of \$7,000,000. A pact for Cuban-American military and naval cooperation in the war with the Axis was signed Sept. 7, 1942. With the agreement of the Cuban Government, the United States constructed air bases near Havana and at San

Julian near the western tip of the island, and established a great military-civilian supply depot at Santiago de Cuba. For the defense establishment on Jan. 1, 1941, see 1943 YEAR BOOK.

Education and Religion. About 39 per cent of the adult population was illiterate at the 1931 census. School statistics for 1939-40 showed 445,706 pupils attending 8,796 public class-rooms; 35,290 pupils in 473 private schools; 3,089 pupils taught by 67 traveling teachers; and 8,972 pupils in night schools for workers. The University of Havana has about 6,000 students. Roman Catholicism is professed by the great majority of the population but there is no state church.

Production. Cuba is primarily an agricultural country, with sugar and tobacco as the chief crops. The 1943 sugar crop was fixed by Government decree at 3,225,000 short tons, compared with the 1942 crop of 4,016,000 short tons (including that part produced as invert molasses). Raw sugar production was 3,804,000 short tons in 1942 and 2,843,080 long tons (of 2,240 lb.) in 1943.

The other leading crops are tobacco (42,534,000 lb. in 1941), coffee (59,256,368 Spanish lb. in 1941-42), bananas (2,245,000 stems in 1942), other fruits and vegetables, cocoa beans, rice, and henequen (exports, 23,687,000 lb. in 1941). The estimated livestock population in 1940 was: 391,000 horses, 33,000 mules, 5,335,000 cattle, 857,000 swine, and 141,000 sheep. In 1941 livestock slaughtered commercially included 510,559 cattle, 209,680 swine, and 33,551 sheep and goats.

Mineral production in 1940 was valued at an estimated \$11,700,000. Exports of mineral ores in 1941 were valued as follows: Manganese, \$6,510,131; copper, \$1,329,346; iron, \$209,924. Chromium, barite, silica, and gold are exported and salt and some petroleum are mined for local consumption. Using both domestic and imported materials, industrial production has expanded rapidly in recent years. The value of manufactures in 1939 was 63,970,624 pesos (excluding products of sugar mills and similar commodities); workers employed numbered 32,101 and raw materials used were valued at 22,234,300 pesos. Tourists entering Havana in 1941 numbered 126,090 and their expenditures were estimated at 14,294,000 pesos.

Foreign Trade. Including bullion, general imports in 1942 amounted to \$146,760,000 (\$133,920,000 in 1941), while general exports were \$182,400,000 (\$211,560,000 in 1941). The figures are in U.S. currency. In 1941 the United States supplied 87.6 per cent of Cuba's imports and took 85.7 per cent of the exports. See 1943 YEAR BOOK for details of 1941 trade.

Finance. Actual regular budget receipts in 1942 were 95,724,000 pesos and expenditures 104,810,000 pesos (1 peso = 1 U.S. dollar). However the transfer to the regular budget of the proceeds of certain emergency taxes imposed in 1941 converted the deficit into a surplus of 1,186,000 pesos—the first since 1936-37. Expenditures for 1943 were estimated at 97,000,000 pesos (23,000,000 for defense). The funded public debt on Dec. 31, 1942, was \$118,416,000 (foreign, \$111,099,000; internal, \$7,317,000); the total on Dec. 31, 1941, was \$123,560,000. The floating debt was estimated at more than 50,000,000 pesos at the end of 1942. In 1941 Congress authorized the Government to obtain a \$25,000,000 credit from the U.S. Export-Import Bank, but none of this had been received up to Dec. 31, 1942.

Transportation. Cuba in 1943 had 6,873 miles of railway lines of all kinds; of these 3,081 miles were lines of common-carrier routes, while the remainder

represented private sugar railways, sidings, etc. Improved roads and highways totaled 2,390 miles. There were air connections with the United States and all the countries of the Western Hemisphere. Air traffic in 1941 was: Planes operating, 3,626; passengers, 65,163; mail carried, 119,227 lb. In 1941 a total of 1,598 vessels entered the port of Havana in the overseas trade (1,666 in 1940).

Government. The Constitution promulgated Oct. 10, 1940 (see *YEAR BOOK* for 1940, p. 171), vested executive power in a President elected for four years. Legislative power rests in a Senate of 54 members (nine from each province) elected for six years, with one-third replaced every two years, and in a House of Representatives containing one member for each 35,000 inhabitants, with one-half the members elected every two years for four-year terms. (Under a temporary arrangement, one-half of the previous Senate and House retained office along with the new Senators and Representatives elected in 1940. Both Chambers were reduced to the constitutional level by progressive steps, terminating in 1944.) The President appoints a Premier, who retains office only so long as he enjoys the support of a majority of the House of Representatives. The President, members of Congress, and provincial and municipal officials are elected by compulsory direct popular male and female suffrage. President in 1943, Col. Fulgencio Batista, who assumed the Presidency Oct. 10, 1940, following his election on July 14, 1940. As a result of the elections of Mar. 15, 1942, the Government coalition at the beginning of 1943 held 35 of the 54 seats in the Senate and 98 of the 138 seats in the House. The Cabinet formed Aug. 16, 1942, was headed by Senator Ramón Zaydín (Liberal).

The Cuban Government declared war on Japan Dec. 9, 1941, and on Germany and Italy Dec. 11, 1941. For developments in 1943, see below.

HISTORY

Cuban-American Relations. The close military, political, and economic collaboration established between Cuba and the United States during 1942 (see 1943 *YEAR BOOK*) was continued and extended during 1943. With the aid of lend-lease shipments of arms and equipment from the mainland, marked progress was made in training Cuban ground, air, and sea forces for both home defense and overseas service. The large United States air base near Havana was completed early in 1943 and named Batista Field. On February 1, a new agreement for military and naval cooperation between the United States and Cuba was signed in Havana. It supplemented the similar accords signed June 19 and Sept. 7, 1942. Provisions of the three accords were not made public. Another agreement signed February 11 applied reciprocal selective service to Cuban nationals in the United States and to United States citizens in Cuba. In March the U.S. Government turned over to Cuba under lend-lease 12 anti-submarine patrol boats. The Cuban crews had been trained in the Navy's sub-chaser school at Miami. The first sinking of a U-boat by one of these sub-chasers was announced by the Cuban Navy three months later.

Meanwhile the program for expansion of the Cuban Army adopted in 1942 was carried forward. On January 22 President Batista recalled to active service 48 former Cuban Army officers, who either resigned or were dropped from the service after opposing the so-called "sergeant's revolt" of 1933 through which Batista began his rise to power. The first drawing of draftees under the 1942 military service law began on April 25 and inductions

for the required four months of military training began in June. Plans called for the induction of 8,000 men every four months, beginning with men between 20 and 25 years of age. Registration of the classes between 25 and 35 and between 35 and 50 took place during separate periods of 1943.

Under the law, draftees could not be sent outside of the island except by special act of Congress. However the regular army was expanded and trained with the Emergency Volunteer Corps for overseas service. President Batista repeatedly expressed the desire of the Cuban people for an active part in the struggle with the Axis. Many army, navy, and aviation officers were sent to the United States for specialized instruction.

On July 23 the Cabinet declared all ports, mines, public services, main highways, radio stations, military bases, sugar mills, and other industries supplying war materials to be war zones and thus subject to martial law. The Government in February warned labor that it would permit no strikes or disturbances during the sugar harvesting season because the crop was vital to the island's economy. A decree of August 24 declared manganese, copper, and chromium to be essential war minerals, the output of which might not be interfered with for any reason. These minerals were of vital importance to United States war industries.

That these tangible measures in support of the American war effort reflected the sentiment of the Cuban people was demonstrated on July 4, when Cuba celebrated the United States national holiday with a huge parade in Havana, organized by the veterans of the Cuban war of independence. The Cuban Government also continued its vigorous drive against Axis sabotage and espionage, winning the commendation of the Emergency Advisory Committee for the Political Defense of the Hemisphere, which met in Havana in August.

Sugar Agreements. Cuba received substantial economic and financial aid from Washington in return for its collaboration. On April 3 the U.S. Commodity Credit Corporation contracted with the Cuban Sugar Stabilization Institute to buy 2,700,000 tons of the 1943 sugar crop at 2.65 cents per lb., f.o.b. Cuban ports. The contract caused dissatisfaction in Cuba, as the total sum involved amounted to about \$160,000,000 as against the \$251,000,000 paid in 1942 for some 4,000,000 tons of raw sugar. The U.S. Government had been unable to move much of the sugar contracted for in 1942 because of the shipping shortage. However improvement in the shipping situation in 1943, and the increased need for Cuban sugar by the mainland and the United Nations, led to the early conclusion on August 21 of a new contract covering the 1944 crop. This time the Commodity Credit Corporation agreed to take 4,000,000 short tons at 2.65 cents a lb., the same price paid in 1942 and 1943. The 1944 sugar check would thus total \$212,000,000, a 33 per cent increase over 1943.

The Tinguaro mill of the Cuban-American Sugar Co. was largely destroyed by fire, with a loss estimated at \$1,000,000, on January 20. Delay by the company in repairing the mill led the Cuban Government to take it over on October 5 and commence repairs to put the property in shape for the spring grinding season.

Other U.S. Aid. It was revealed early in 1943 that the U.S. Defense Plant Corporation had advanced a credit of \$20,000,000 for the exploitation of Cuba's nickel deposits. The previously untouched \$25,000,000 credit advanced to Cuba by the Export-Import Bank in 1941 (see 1942 *YEAR BOOK*)

was utilized in part during 1943 for the development of a food production program designed to compensate in part for the smaller sugar crop. On the strength of a U.S. Government contract to purchase 40,000,000 lb. of dehydrated Cuban vegetables annually for two years, the program called for the construction of six refrigerated warehouses and a dehydration plant. Farm machinery was to be acquired to encourage diversification of agricultural production. The U.S. Treasury's agreement for the sale of gold to Cuba to stabilize the currency was extended for three years from June 30, 1943.

Other Foreign Relations. The Soviet Ambassador to the United States presented his credentials as Minister to Cuba to President Batista on April 9. In August, Cuba recognized the French Committee of National Liberation in Algiers. Members of the pro-United States *Acera del Louvre* Association in January announced a boycott of Argentine and Chilean products in a move to force those countries to break off relations with the Axis powers. In July the Cuban and Spanish Governments signed an agreement for unfreezing equal amounts of blocked Spanish and Cuban credits, permitting a resumption of the previously important commercial relations between the two countries.

Political Developments. With a Presidential election scheduled for June 1, 1944, the political campaign got under way during 1943 with the customary fervor. Leaving the field clear for other candidates, President Batista on January 22 reiterated his intention to retire from office at the expiration of his term. Late in May he obtained Congressional approval of the new electoral code under which the elections were to be conducted. But difficulties encountered in compiling the electoral census and dissensions within the government coalition threatened for some time to interfere with the balloting.

Friction between Batista and Minister of Education Ramón Vasconcelos, a leader of the Liberal party, led to the resignation of the Minister on January 6. A number of the other Ministers followed suit, inaugurating a Cabinet crisis that lasted for three months. Meanwhile a special session of Congress declined to approve emergency financial and economic legislation demanded by the President. The Cabinet crisis was finally resolved on March 6, when Batista appointed six new Ministers, of whom two were members of the opposition ABC party and one represented the Communists. While supporting Batista, the Communist party hitherto had not been represented on the Cabinet.

The new arrangement found all of the Cuban political parties supporting the Government except Dr. Ramón Grau San Martín's Authentic Revolutionary party. Grau San Martín, who unsuccessfully opposed Batista in 1940, indicated that he would again be the opposition candidate for President. The leading contender for nomination as the official Administration candidate was a National Democrat, Senator Carlos Saladrigas y Zayas, who served as Premier in 1942. Opposition to the Saladrigas candidacy led to a split in the National Democrats on May 13. Vice-President Gustavo Cuervo Rubio, supported by the Mayor of Havana, 2 Cabinet Ministers, 11 Senators, 7 Representatives, and 2 Provincial Governors, withdrew and formed the new Republican party. The new party went into the opposition and its two Cabinet Ministers resigned May 17. Guillermo Alonso Pujol, another supporter of Vice-President Cuervo, resigned as President of the Senate August 23. He was succeeded by Senator José Enrique Brin-

guier y Laredo, who was also a National Democrat. Meanwhile the Cuban Communist party, boasting a Cabinet Minister, a newspaper, and a radio station, was reported growing rapidly, partly at the expense of Grau San Martín's *Auténticos*. Its effort to control Cuban labor through the Confederation of Cuban Workers received a setback early in September. The leaders of the maritime unions resigned from the Confederation in protest against the overwhelming Communist influence displayed at a meeting in Havana of the executive committee of the Confederation of Latin-American Workers.

The inability of the Government parties to agree upon a candidate led President Batista on August 20 to declare that he would turn over the Presidency to the oldest Justice of the Supreme Court, in accordance with the Constitution, if a successor was not elected before the expiration of his term. Preliminary returns on party registrations under the new electoral code, published on November 1, indicated an easy victory for the Government coalition in 1944 if it remained united. A total of 1,218,000 members registered from the five coalition parties, as against 419,000 in Grau San Martín's *Auténticos*. The new Republican party, with some 231,000 members, was expected to oppose the Administration candidate. About 300,000 voters failed to register in any party.

Economic Conditions and Measures. Economic conditions in Cuba remained difficult in many respects during 1943 as a result of the lower production and export of sugar; reduced exports of rum, tobacco, fruits, and vegetables; the growing scarcity of imported goods and consequent rapid rise in prices; and the large budget deficit resulting from the action of Congress in raising government salaries and pensions in 1942 without providing for higher revenues.

In his message to the special session of Congress on January 27 Batista proposed increased taxes on incomes, profits, property, and capital along with levies on inactive bank accounts. His tax program, originally designed to raise an additional \$16,000,000 annually, was adopted in an altered and less drastic form after months of delay. Among the new taxes imposed was one levying 1.8 per cent annually on foreign investments of Cubans and foreigners doing business in Cuba. This aroused vigorous protests among American firms operating on the island. Cuban employers in mid-summer organized a Confederation of Producers and sought official recognition of its right to consult with the central, provincial, and municipal governments on measures affecting their interests.

Price control regulations introduced in 1942 encountered many difficulties. Refusal of cattle growers to sell livestock at the fixed price led the Government in March to take over and operate a number of slaughter-houses. Ceiling prices were fixed for previously uncontrolled food items from time to time. In July a Government decree established maximum rates for water, light, gas, power, and for land, sea and air freight rates, and passenger fares. Former President Carlos Hevia, chief of the Office of Price Control and Supply, resigned August 21 on the ground of insufficient authority to enforce his price control rulings.

A Board of Economic Warfare was established May 11 for the purpose of adapting Cuba's economy to the war emergency and preparing to meet postwar contingencies. Headed by the Premier, the Board had both advisory and executive powers. On September 2 the Board made recommendations to President Batista that ran counter to much of

Cuba's recent economic legislation. It suggested inducements to foreign and local capital to establish new industries, including the stabilizing of customs rates, tax levies, and labor conditions for five years. The \$12,000,000 Bacardi rum plant at Santiago was placed under the management of a Government agent October 6 when the company refused to comply with a Government order for wage increases that followed a sitdown strike in April. A marked improvement in economic conditions was noted toward the year's end, but the continued rise in living costs caused a continuing agitation for higher wages.

Other Events. A serious epidemic of typhoid and malaria broke out in many districts of Oriente, Santa Clara, and Havana provinces during July, apparently because of the relaxation of sanitary precautions. There were recurrent strikes of high school students against the introduction of a five-year course and the stiffening of requirements for entrance into Havana University.

See GEOLOGICAL SURVEY; PAN AMERICANISM; SPANISH-AMERICAN LITERATURES; WORLD WAR.

CULTURAL RELATIONS, Division of. See STATE, U.S. DEPARTMENT OF.

CURAÇAO. A Netherlands West Indian colony comprising two groups of islands 500 miles apart. One group just north of Venezuela includes Aruba (69 sq. mi.), Bonaire (95 sq. mi.), and Curaçao (210 sq. mi.); the other group just east of the Virgin Islands includes Saba (5 sq. mi.), St. Eustatius (7 sq. mi.), and the southern part of St. Martin (17 sq. mi.). Total area, 403 square miles. Population (Jan. 1, 1942), 109,592. In 1941 there were 3,355 births and 1,042 deaths. Willemstad (capital), on the island of Curaçao, had 31,264 inhabitants.

Production and Trade. Refined oil (from imported crude oil), straw hats, phosphate of lime, and salt are the main products. Oil refining is the most important industry. Trade (1941), excluding petroleum: imports were valued at U.S.\$15,168,156; exports totaled U.S.\$1,420,046. Air services link Curaçao, Aruba, Jamaica, Trinidad, and North and South America. Shipping entered the ports (1941): 6,789 vessels totaling 24,678,119 register tons.

Government. Budget (1942): revenue 14,513,901 guilders; expenditure 14,199,041 guilders (the exchange value of the guilder was \$0.525 in February, 1943). Curaçao is administered by a Governor, assisted by a council of 4 members, and a States Council of 15 members (10 elected by the voters and 5 nominated by the governor). Governor, Dr. Pieter Kasteel (appointed May 21, 1942).

CURRENT INFORMATION, Division of. See STATE, U.S. DEPARTMENT OF.

CURRENT TAX PAYMENT ACT. See TAXATION.

CURTISS P-40, SO3C-2. See AERONAUTICS under *Types*.

CURTISS-WRIGHT C-46, SB2C. See AERONAUTICS under *Types and American Transports*.

CUSTOMS, Bureau of. The almost complete concentration of the national economy of this country on war operations during the fourth year of the world war increased materially the problems and activities of the Customs Service during 1943. There was no respite from the numerous war-inspired activities, which had progressively multiplied during the three preceding years, but to these were added new responsibilities and functions resulting

from the accelerated tempo of our productive and distributive operations. Since the normal as well as the previously delegated wartime activities of the Customs Service have received due consideration in past editions of the YEAR BOOK, the reader is referred to these former articles for a more complete description of customs functions and performances prior to the present year. This article is limited to those occurrences during 1943 which deserve special mention.

Wartime Activities. Among new problems of the Customs Service resulting directly from this year's prosecution of the war, the following are enumerated: the extension by Executive Order 9177 dated May 30, 1942, to the War Department, Treasury Department, Department of Agriculture, and Reconstruction Finance Corporation of the same privileges of the free entry of merchandise formerly enjoyed only by the Navy Department; the disposal of the salvaged property of torpedoed and wrecked vessels; the handling of imported materials taken into temporary custody and removed from docks or warehouses by the War Department in order that the movement of war supplies might not be impeded by any congestion of transportation facilities; the superintendence over imported merchandise which could not be removed from customs custody within the limited statutory period because of delays caused by export control, Foreign Funds Control, or other governmental emergency licensing requirements or by other wartime conditions; and the admission free of duty of such special categories of merchandise as the effects of persons evacuated to the United States by Government order, articles for members of the Armed Forces of the United Nations, gifts sent home by soldiers and sailors abroad, and articles for enemy prisoners of war.

Indirectly, as well as directly, the continuation of hostilities added to customs activities. Rationed articles, such as processed foods, coffee, sugar, shoes, and rubber products, were detained upon importation unless ration stamps were surrendered or a permit secured from the Office of Price Administration, and the lading of such articles for use as ships supplies on outgoing vessels was carefully limited and supervised. A number of waivers of compliance with certain provisions of the navigation laws, particularly to permit some foreign-flag vessels to engage in coastwise and other types of trade from which they would ordinarily be excluded, were issued under the authority of the Second War Powers Act.

Customs Collections. For the second successive year total collections by the Customs Service declined. Of the total collected in 1943 (\$414,191,247) \$328,123,797 represented actual customs receipts and \$86,067,450 collections for other governmental agencies. Of the total collected in 1942 (\$428,596,660) actual customs collections constituted \$390,059,109, while \$38,537,551 was for other agencies. By far the largest portion of collections for other agencies consisted of internal-revenue taxes on imported liquor and the large increase in such collections was due not so much to an increase in the quantity brought in as to an increase in the tax rates. The commodities included in twelve of the fifteen schedules of the tariff act yielded less revenue than in 1942, increased collections accruing only from imports of wool, liquors, and tobacco.

The gradual downward trend in customs receipts which prevailed throughout the fiscal year 1942 was greatly accelerated during the first three months of the fiscal year 1943, and in September,

1942, duties and miscellaneous customs collections aggregated only \$20,579,557, the smallest amount collected during any single month in more than seven years; in fact, not since July, 1935, had collections for any month fallen below 22 million dollars. During the five months beginning with October, 1942, collections averaged \$25,001,862 and exhibited a perceptible trend upward. Collections increased sharply in March and went slightly above the March level during the subsequent months, averaging \$34,104,856 for the last four months of the year.

Volume of Business. The downward trend in the number of entries of merchandise which began in 1939 continued during the present year. Under war conditions an increase in the quantity and value of the goods included in each individual entry by governmental or commercial importers has been concomitant with a decline in the number of such entries. Consequently there were fewer of each of the important types of entries than in the previous year.

Contrary to the trend of duty collections and entries of merchandise, border traffic increased for the second successive year, declines in automobile and ferry traffic being more than offset by the greater use of other transportation media. The most important traffic trend appeared in the increased use of passenger trains by those wishing to cross the border. Airplane traffic on international lines continued its expansion for the twelfth consecutive year.

Enforcement of Customs Laws. For the second successive year more seizures were made than during the preceding year, every type of seizure except lottery seizures being more numerous than in 1942. The total value of goods seized by customs officers, however, was not as great as in 1942, due to the fact that during the earlier year vessels of much greater value were seized than during 1943. Although more liquor seizures were made than during the previous year, the quantity and value of distilled and malt liquors and alcohol were less than in 1942. Narcotic seizures increased both in number and value as compared with the previous year, but these seizures continued to be confined to quantities far smaller than in the heyday of narcotic smuggling. A considerable portion of the narcotic seizures was made along the Mexican border.

W. R. JOHNSON.

CUTBACKS. See BUSINESS REVIEW; CHEMICAL INDUSTRY; MACHINERY. For **Cutback Strikes**, see LABOR CONDITIONS under *Strikes*.

CYCLONES. See HURRICANES.

CYCLOTRON. See PHYSICS under *Hundred Million Volt X-Rays*.

CYPRUS. A British island colony in the eastern Mediterranean, 40 miles distant from the Anatolian Peninsula and 60 miles from the Syrian coast. Area, 3,572 square miles; estimated population in 1940, 383,967. Living births in 1940 numbered 13,257; deaths, 4,678. Chief towns: Nicosia (capital), 24,695 inhabitants; Limasol, 15,757; Larnaca, 12,292; Famagusta and Varosha, 10,579. The majority of the inhabitants speak a Greek dialect and profess the Greek Orthodox faith. About one-fifth are Turkish-speaking Moslems. There are small Maronite and Armenian minorities. The educated classes speak English and French. Each religious group has its own schools, the primary schools being under government supervision.

Production, Trade, etc. The chief products in 1940 were wheat 1,723,000 bu., barley 1,595,000 bu.,

olives 12,848 tons, carobs 39,700 tons, potatoes 29,150 tons, raisins 5,375 tons, wines 3,835,000 gal., olive oil 450,000 gal., cupreous pyrites, asbestos, gypsum, terra umbra, and sponges. Livestock (1940): 43,700 cattle, 313,500 sheep, 169,000 goats, 59,400 donkeys, 14,000 horses and mules, 37,400 pigs. The overseas merchandise trade in 1940 was: Imports, £1,782,430; exports, £1,526,423. Shipping entered and cleared in 1940 totaled 689,308 tons. Roads extended 2,581 miles in 1940.

Government. Estimated budget expenditures for 1942 were £1,418,833; revenue, £1,194,901. Public debt on Jan. 1, 1939: £822,300. Administration is in the hands of a Governor, assisted by an executive council. The legislative council was abolished as a result of disturbances in 1931 (see YEAR BOOK for 1931) and the Governor was granted power to legislate. An advisory council was established in 1933. Governor, Sir Charles Woolley (app. Sept. 20, 1941).

CYRENAICA. See LIBYA.

CZECHOSLOVAKIA. A former Central European republic (capital, Prague), partitioned among Germany, Poland, and Hungary in 1938 and 1939, with the exception of part of Slovakia which became a nominally independent republic under German protection, with its capital at Bratislava. The manner in which the Czechoslovak republic was partitioned was described in detail in the YEAR BOOKS for 1938 and 1939 and is summarized in the accompanying table.

PARTITION OF CZECHOSLOVAKIA

Territory annexed	Date of session or seizure	Area sq. mi.	Estimated pop. 1939
To Germany:			
Sudetenland.....	Sept. 29, 1938	11,071	3,653,292
Bohemia-Moravia..	Mar. 16, 1939	19,058	6,804,875
To Poland:			
Teschen district ..	Nov. 1, 1938	419	241,698
To Hungary:			
Parts of Slovakia and Ruthenia ..	Nov. 2, 1938	4,566	1,027,450
Remainder of Ruthenia.....	Mar. 14, 1939	4,283	552,124
Additional Slovak districts.....	Apr. 4, 1939	683	80,933
Slovakia, Republic of	Mar. 14, 1939 ^c	14,165 ^d	2,369,163 ^d
Total.....		54,245	14,729,535

^a Occupied by Germany in September, 1939; 225 square miles were transferred to Slovakia on Oct. 21, 1939. ^b Ruthenia is also referred to as Carpatho-Ukraine. ^c Date of Slovak declaration of independence. ^d Excluding areas transferred from Poland to Slovakia by Germany on Oct. 21, 1939. Within the frontiers fixed by the German-Slovak treaty of Nov. 31, 1939, Slovakia had an area of 14,706 square miles and a population on Dec. 15, 1940, of 2,654,000.

The Sudetenland was annexed as an integral part of the German Reich. Hungary similarly incorporated in its national territory the districts acquired from Czechoslovakia. Bohemia and Moravia were established as a protectorate within "the territory of the Great German Reich." See separate articles on BOHEMIA AND MORAVIA and SLOVAKIA.

Government-in-Exile. The Government of Czechoslovakia in London, which won full recognition from Great Britain, the United States, and the Soviet Union in 1941 (see 1942 YEAR BOOK for details), was constituted as follows at the beginning of 1943: President, Dr. Eduard Beneš; Premier, Mgr. Jan. Sramek; President of the State Council of 40 members, Prokop Maxa. The Cabinet included Jan Masaryk, Deputy Premier and Minister of Foreign Affairs; Gen. Sergej Ingr, National Defense; Dr. Juraj Slavik, Interior; Frantisek Nemec, Economic Reconstruction and Trade; Dr. Ladislav Feierabend, Finance; Dr. Jaroslav Stransky, Jus-

tice; Dr. Hubert Ripka and Gen. Rudolf Viest, Ministers of State; Jan Lichner, Agriculture and Public Works; Jan Becko, Social Welfare.

The Government signed military accords with Great Britain on Oct. 25, 1940, and with the Soviet Union on July 18, 1941, under which independent Czechoslovak military and air forces were organized in the British Isles and Russia. On Dec. 16, 1941, President Beneš issued a decree declaring the Czechoslovak Republic in a state of war with all countries at war with Great Britain, the U.S.S.R., or the United States. For 1943 developments, see *History*.

HISTORY

The Czechoslovak Government in exile in London grappled with three major problems during 1943. President Beneš and his associates sought (1) to safeguard the independence and security of a restored Czechoslovak Republic after Germany's defeat, (2) to establish and maintain political unity among the nationalities, classes, and political parties comprising the republic, and (3) to complete plans for postwar economic and social reconstruction.

Foreign Relations. The first of these problems involved primarily Czechoslovakia's relations with the U.S.S.R., Great Britain, the United States, and Poland. During previous years these powers and more than 20 other United Nations had recognized the Czechoslovak Government in exile and the pre-Munich boundaries of the republic (see 1943 YEAR BOOK). Early in 1943 the Soviet Government formally affirmed the assurances given President Beneš by Foreign Commissar Molotov in May, 1942, that Moscow recognized Czechoslovakia's pre-Munich frontiers. This relieved fears that the Soviet Government would lay claim to the eastern or Carpatho-Russian (Ruthenian) districts of the republic in the peace settlement.

On the other hand, the growing friction between Moscow and the Polish Government in exile that led to the severance of diplomatic relations on Apr. 26, 1943, aroused the gravest apprehensions in Czechoslovak governmental circles. Polish-Russian hostility threatened to disrupt the collaboration between Russia and the other United Nations which Dr. Beneš considered essential to postwar peace and stability in Europe and to the survival of Czechoslovakia as an independent state. Consequently Beneš declined to proceed with the program of Polish-Czechoslovak federation set forth in the agreements of Nov. 11, 1940, and Jan. 25, 1942 (see 1943 YEAR BOOK, p. 188), unless friendly relations were restored between Poland and Russia. Furthermore he insisted that no federation program was feasible among any of the small Central European states except with the prior approval of both the Soviet Union and Britain. Another obstacle to Czechoslovak-Polish federation was the continued failure of the Polish Government to agree to the restoration of Teschen and of other small frontier districts in Slovakia that were acquired by Poland by means of an ultimatum on Oct. 1, 1938 (see 1938 YEAR BOOK, p. 190).

Late in February it was announced that Beneš was planning an official visit to the United States and Russia. He arrived at the White House in Washington on May 12, a day after Prime Minister Churchill had taken up temporary residence there, and the three statesmen employed the opportunity for a discussion of Eastern European and Russian affairs. The Anglo-American governments had previously manifested approval of the proposed federation of the small Eastern and Central European

states. In this discussion and in a series of important addresses delivered before both houses of the U.S. Congress, the Canadian Parliament, and various semi-official and private meetings in New York and Chicago, Beneš emphasized that the collaboration of both Russia and France was a prerequisite to the establishment of any effective system for maintaining the peace of Europe. Coincident with Beneš's arrival in Washington, President Roosevelt sent to the Senate the nomination of Anthony J. Drexel Biddle to be Ambassador (instead of Minister) to the Czechoslovak Government in exile.

Following his return to London, Beneš on June 24 broadcast to Czechoslovakia a report on the results of his journey. Referring to the efforts of German propaganda to divide the U.S.S.R. and the United States, he said that he had participated in "official conversations between the United States and the Soviet Union as well as in considerable public discussions" which had made the prospect of "friendly undisturbed collaboration between the United States and Soviet Union during and after this war . . . absolutely certain and firm."

One of the issues taken up by Beneš in Washington was his proposal for a mutual assistance pact with the Soviet Union. While the United States apparently raised no objection, the British and Polish Governments early in June reportedly urged him to postpone his visit to Moscow and the signing of the treaty pending a further British effort to restore friendly Polish-Russian relations. Impatience at the delay was expressed by the Czechoslovak Government on October 2 when it openly announced its desire for a mutual assistance pact with Russia. The Soviet Government indirectly took the same stand a week later. The issue was one of many brought up for consideration at the meeting of the British, American, and Russian Foreign Ministers in Moscow late in October.

At that conference the Russian Foreign Commissar was reported to have insisted on immediate conclusion of the treaty. While considering the move ill-timed and calculated to discourage progress toward a new world order, the British and U.S. Governments raised no further objection. Dr. Beneš then journeyed to Moscow and on December 12 a 20-year mutual assistance pact was signed.

In it the two parties agreed to unite in a policy of permanent friendship and friendly postwar collaboration, as well as mutual assistance of all kinds in the war against Germany and her allies (Art. I). They bound themselves "not to enter any sort of negotiations with the Hitlerite Government or any other Government of Germany which does not explicitly renounce all aggressive intentions" and not to discuss "any sort of treaty of peace" with Germany and her allies except by mutual agreement (Art. II). They reaffirmed the Soviet-Czechoslovak mutual assistance pact of May 16, 1935, and agreed to provide each other military and other support if either became "involved in hostilities with Germany, renewing her policy of *Drang nach Osten*," or with any other state united with Germany in such a war (Art. III). Both parties agreed to collaborate on the basis of "mutual respect of their independence and sovereignty as well as noninterference in the internal affairs of the other State" and to render each other all possible postwar economic assistance (Art. IV). Each also undertook "not to conclude any alliance and not to take part in any coalition directed against the other" (Art. V).

A protocol attached to the treaty provided "that should any third power bordering on the U.S.S.R. or the Czechoslovak Republic, and representing in this war an object of German aggression, express a

desire to join the present agreement, the latter will be given the possibility of signing this agreement . . .

Meanwhile friendly relations between Czechoslovakia and the Soviet Union had been strengthened by the participation of at least two Czechoslovak battalions, composed mostly of Carpatho-Russians, in the fighting against the Germans on the Russian front. These troops had fought with the Poles against the Germans, were then interned in Russia, and were released to form an independent Czechoslovak military force under command of the Red Army through the Czechoslovak-Soviet agreements of July 18, and Sept. 28, 1941. By another agreement signed in Moscow May 29, 1943, the Soviet Government undertook to furnish funds, equipment, and services for the maintenance of the Czechoslovak units.

In a British-Czechoslovak accord of Jan. 22, 1943, the British undertook to make supplies and services for the Czechoslovak military forces in Britain available on a lend-lease basis. The Czechoslovak Government agreed to extend similar facilities to British armed forces if they were on Czechoslovak soil. In mid-August Czechoslovak troops which had fought with the British in Syria and North Africa arrived in Britain to join the Czechoslovak army there.

Early in 1943 the Yugoslav Government in exile followed other Allied Powers in repudiating the Munich Accord, under which Czechoslovakia lost the Sudetenland to Germany in 1938. By another agreement reached early in 1943, the Yugoslav Government arranged to attach Yugoslav recruits from outside of Yugoslavia to the Czechoslovak army in Britain.

Internal Politics. The pro-Soviet policy of Beneš and his Government had some adverse repercussions in internal politics during 1943. In frequent radio broadcasts from London to Czechoslovakia Beneš and his associates took pains to counter charges that the Czechoslovak Government had become the agent of Stalin and that its policy threatened the postwar independence of the Czechoslovak Republic. Somewhat similar, though less extreme, charges were made by anti-Soviet elements among the Czechs and Slovaks who had taken refuge in Britain and the large immigrant communities in the United States. Stefan Osusky, former Czech Minister to Paris, headed an opposition movement to Beneš in London. Former Premier Milan Hodza, who visited the United States during the year, was likewise strongly critical of the Beneš policies.

Another source of opposition to the Beneš Government in Slovakia and Carpatho-Russia and among some Slovaks and Ruthenians abroad was their long-standing opposition to Czech domination of the Czechoslovak Republic. The Government in exile, which included both Czechs and Slovaks, countered this sentiment by pledging a greater degree of local autonomy to nationality groups within the republic and promising to submit the Government's actions and policies to a popular vote as soon as possible after the restoration of independence. A second Carpatho-Russian was appointed to the Czechoslovak State Council in London in February.

A formal statement of the Government's policy toward Slovakia was adopted June 30. It made plain that the secession of Slovakia from the Czechoslovak Republic on Mar. 14, 1939, would not be recognized; that there would be no future toleration of political parties likely to "undermine the liberty of the nation," a reference to the role

played by the Slovak People's party in 1938-39; and that there would be no compromise with the Rev. Joseph Tiso and his associates who had betrayed the republic.

With regard to the German and Hungarian minorities that were employed as tools for the partition of Czechoslovakia, President Beneš on February 18 proposed the compulsory transfer of unassimilable minorities to the countries of their choice after the war and the treatment of other minorities along the same lines as in America—without separate national rights but with all civil and democratic rights of the majority.

See *CHEMISTRY under Foreign*; *HUNGARY under History*; *WORLD WAR*.

DAHOMY. See *FRENCH WEST AFRICA*.

DAIRYING. The number of milk cows on United States farms as of Jan. 1, 1943, according to the U.S. Department of Agriculture, was 26,946,000, as compared with 26,398,000 a year earlier. The average value per cow was \$99.61 and the total value \$2,684,120,000. The number of cows in leading States was: 2,452,000 in Wisconsin; 1,845,000 in Minnesota; 1,544,000 in Iowa, and 1,532,000 in Texas.

Milk production in the United States in 1943 was estimated at 118,235,000,000 lb.—1,005,000,000 less than in 1942. The average daily production per cow was 12.15 lb. as of Jan. 1, 1944, ranging from 7.57 lb. of milk per cow in the South Central States to 15.13 lb. in the North Atlantic States. The goal for milk production in 1944 was set at 121,237,000,000 lb. In 1943 milk production failed to reach the proposed goal by about 4,000,000,000 lb.

The estimated quantities of milk utilized in 1943 for the more important dairy commodities were: whole milk cheese 9,785,000,000 lb.; market milk 53,400,000,000; butter 41,856,000,000; evaporated and plain condensed milk 6,780,000,000; sweetened condensed milk 225,000,000.

Milk products and by-products obtained included 4,100,000,000 lb. of cream for butter; 1,701,000,000 lb. of butter (a decrease from 2,228,000,000 lb. the previous year); 3,240,000,000 lb. of evaporated and plain condensed milk; 974,000,000 lb. of whole milk cheese, 8,800,000,000 lb. of whey; and 250,000,000 lb. of sweetened condensed milk. To compare production with that of the preceding year, see 1943 YEAR BOOK, p. 227. For a discussion of trends and developments, see *AGRICULTURE*; *FOOD INDUSTRY*. For the Bureau of Dairy Industry, see *AGRICULTURE*, U.S. DEPARTMENT OF.

DAKAR. See *FRENCH WEST AFRICA*.

DALMATIA. See *YUGOSLAVIA under History*.

DAMS. Of interest and great importance is the successful breaching of dams in Germany by aerial attacks of the Allied forces. It indicates what may be expected on a larger scale in future warfare. Placing the explosives in position to cause effective damage required intensive training and experiment by the force entrusted with these attacks. The breaching not only caused destructive floods, but destroyed or put out of service power plants serving large war industries. A first attack on an Italian concrete dam by aircraft carrying torpedoes failed on account of the massiveness of the concrete, and the enemy countered by placing torpedo nets. Success in other attacks resulted from the use of marine mines, which carry much more explosives than bombs.

Three dams were breached: the Moehne and Sorpe Dams which control 75 per cent of the drainage area of the Ruhr River, and the Eder Dam on the Weser River. In the Moehne gravity concrete dam, built in 1913, 132 ft. high and 2,145 ft. long, the breach was some 250 ft. wide and 42 ft. deep. The arched Eder Dam (1914), 157 ft. high and 1,310 ft. long, was breached in two places and to such a depth as to practically drain the reservoir.

Numerous dams are essential features in the irrigation and power projects of the U.S. Bureau of Reclamation, but late in 1942 the War Production Board stopped work on all such structures then under construction. Later, it permitted resumption of work on several projects considered important for increasing food production on large areas in 1945 and 1946.

The Shasta Dam on the Sacramento River, key structure of the Central Valley project, California, is 90 per cent completed, and two of its five 70,000 kilowatt generators will be in service in March, 1944. With height of 602 ft. and crest length of 3,500 ft. it will be one of the three largest concrete dams in the world—higher than the Grand Coulee Dam and of greater volume than the Boulder Dam. A 97-mile transmission line is being built to deliver current to the distribution system of the Pacific Gas & Electric Co., which will take 150,000 kilowatts and pay the U.S. Government a minimum of \$2,775,000 annually.

On the same project and 8 miles further downstream, the Keswick Dam, under construction, is a straight gravity concrete dam, 138 ft. high and 912 ft. long. The Friant Dam, on the San Joaquin River, of the same type and on the same project, 320 ft. high and 3,430 ft. long, is ready to deliver water to the 37-mile Madera Canal, and 84-in. needle valves from the Boulder Dam will be installed temporarily to regulate the discharge. This Central Valley project is to conserve water for irrigation, power, flood control, navigation, salinity control, and for municipal and industrial purposes. The arch-type Altus Dam, Lugert-Altus project, is permitted to be built to sufficient height to provide a supplemental supply to Altus, Okla., and a neighboring military establishment. Eventually, it will be 110 ft. high and 1,100 ft. long.

Of earth and rock-fill—or embankment—dams, the highest in the world will be the Anderson Ranch Dam on the Boise project, Idaho, of the Reclamation Bureau; 440 ft. high and 1,350 ft. long. Its completion, authorized in October, 1943, is set for 1945, but the number of workmen is rigidly restricted on account of labor shortage. The Green Mountain Dam, 309 ft. high and 1,050 ft. long, on the Colorado-Big Thompson project, was completed and began delivery of current early in 1943 for Denver and war industries. Water from its reservoir will flow through the 13-mile Continental Divide tunnel for irrigation in northeastern Colorado.

Work is progressing on the Deerfield Dam, Rapid Valley project, South Dakota, 100 ft. high and 800 ft. long, and on the Jackson Gulch Dam, Mancus project, Colorado, 130 ft. high and 1,930 ft. long. Two works authorized in 1943 for the replacement of old and deteriorated structures built by private interests, both in Utah, are the Newton Dam, 109 ft., and the Scofield Dam, 105 ft. high. At both the Friant and Shasta Dams, noted above, gold was recovered in washing gravel for concrete. At the Friant Dam, the total value was \$200,000, of which \$24,000 went for plant and operating costs, with the net \$176,000 divided

equally between the Bureau and the contractor. At the Boulder Dam, the twelfth generator of 75,000 kilowatts was installed in 1943.

Of the dams being built by the Corps of Engineers, U.S. Army, for flood control, power, and river regulation, the Denison Dam on the Red River, Texas, was completed in October, and power development is expected to begin in January, 1944, several months ahead of schedule. Work is to be started soon on the Fort Gibson Dam on the Grand River, Oklahoma. It will be 110 ft. high and 2,950 ft. long, supplemented by 11,500 ft. of earth dikes closing low spots in the shore line of the reservoir. Construction of the Barker Dam on Buffalo Bayou, Houston, Texas, was ordered stopped, but the War Production Board rescinded its order as the flood hazard was actually increased by the dam in its unfinished state.

The Tennessee Valley Authority, with the completion of the Kentucky and Fontana dams in 1944, will have no less than 27 dams, all but two of which are for power development as well as storage. Ten dams on the Tennessee River have locks for navigation. During 1943, the Douglas, Fort Loudoun, Apalachia, and Ocoee No. 3 dams were completed and their power plants put in operation. The Apalachia Dam, concrete gravity type, is 150 ft. high, but as its power house is 13 miles downstream the head of water on the turbines is about 400 ft. The Douglas Dam, of the same type, is 160 ft. high and 1,682 ft. long. Other dams and works are authorized by Congress but deferred as postwar projects.

Failures of dams are rare, but on June 10 an earth dam on Sinker Creek, Idaho, collapsed after having been saturated by floods. It was 70 ft. high and 1,100 ft. long, built in 1910 by an irrigation district.

At Seattle, Wash., a contract was let in February, 1943, for adding 182 ft. to the height of the Ross Dam on the Skagit River, making its height 490 ft. This multiple-arch concrete dam is part of the city's hydroelectric development for municipal service. Power development for Tacoma, Wash., will be increased by the Nisqually River project, which includes the Alter and LaGrange dams, both serving the Alter power house. At both of these cities, war conditions increased the cost so far above the original estimates as to necessitate revision of the financing plans.

For additional water supply at San Diego, Calif., the San Vicente Dam was completed in March. Its present height is 190 ft., but the design provides for its extension to 300 ft. when needed. Contract for an arch dam 200 ft. high on the Sweetwater was placed in August. Water supply at Santa Fe, N.M., was increased with the completion of the Nichols Dam, 85 ft. high. It is an earth fill of the semi-hydraulic type; that is, the earth was hauled to the site in trucks and then distributed by hydraulic jets.

Foreign Dams. The breaching of concrete dams in Germany by aerial attacks has been noted above. An ambitious project revived in England is for a great dam across the estuary of the Severn River, just above the head of the Bristol Channel. Its special feature is in utilization of a tidal rise and fall of some 30 ft. twice daily. The power dam, 4,550 ft. long, with 72 turbines, would be parallel with the stream and at right angles with a spillway dam 6,800 ft. long. Locks would provide for navigation. Shipping interests are strongly opposed, on account of predicted serious effects in shoaling and other troubles resulting from interference with such great tidal forces. In view of the enormous

cost and the time required for construction, the Government has refused approval of the project at this time.

A small dam on the Ogoki River in Ontario, Canada, is of international importance in diverting water that formerly flowed northward to Hudson's Bay so as to flow southward and indirectly into Lake Superior. There is also a new connection between Long Lake and Lake Superior to float pulpwood and add to the flow through the Great Lakes. Another Canadian project is for a dam and causeway across the Canso Strait between the mainland of Nova Scotia and Cape Breton Island. There is heavy traffic with mines and steel mills on the island, and the present ferry service is costly. A channel would be left for navigation.

In Mexico, the Azucar earth-fill dam, four miles long, on the San Juan River, was reported completed in 1943, for irrigation purposes. The government plans to begin work in 1944 on an irrigation dam near Nejapa, Oaxaca, on the isthmus of Tehuantepec. In Costa Rica, a concrete dam for power development on the Virilla River, near San Jose, was practically completed in 1943. It is 33 ft. high and 200 ft. long. An old overflow dam 7 ft. high and 760 ft. long, on the Tunuyan River in Argentina, has been rebuilt as a high dam with sluice gates, to serve irrigation canals on both sides of the river.

Both South Africa and Australia have large dams planned for irrigation and power development projects after the war. Two of the more definite projects in the Union of South Africa are on the Orange River at Bethulie, and the Caledon River at Ficksburg, the latter diverting water through a 21-mile tunnel to irrigate lands on the opposite side of a mountain range. The government of Victoria, Australia, has started work on the Kilwa River project, where dams will form reservoirs at 5,500 ft. above sea level, and canals and tunnels will deliver the water to a series of dams and power plants. The great dam, with locks and power plant, on the Dnieper River, was reported breached in October, 1943, by the retreating Germans. In 1941, it was partly destroyed by the retreating Russians, but partly repaired by the then advancing Germans. See FLOOD CONTROL; TUNNELS; WATER SUPPLY.

E. E. RUSSELL TRATMAN.

DANCE. See MUSIC.

DARK ADAPTATION. See PSYCHOLOGY under *Sensation*.

DAY CARE FOR CHILDREN OF WORKING MOTHERS. See FEDERAL SECURITY AGENCY; also, CHILDREN'S BUREAU; FEDERAL WORKS AGENCY; STATE LEGISLATION under *Social*.

DEATHS, DEATH RATES. See ACCIDENTS; NECROLOGY; PUBLIC HEALTH SERVICE; VITAL STATISTICS; the major countries under *Area and Population*. Compare MEDICINE AND SURGERY, ETC.

DEBTS, National. See PUBLIC FINANCE; countries under *Finance*.

DECLARATION ON ITALY. See ITALY under *History*; UNITED NATIONS.

DECLARATION OF MOSCOW. See UNITED NATIONS.

DEFENSE, National. For topics pertaining to the national defense of the United States, see WAR PROGRAM. See foreign countries under *Defense and History*.

DEFENSE COUNCILS. See CIVILIAN DEFENSE, OFFICE OF.

DEFENSE HEALTH AND WELFARE SERVICES. See FEDERAL SECURITY AGENCY.

DEFENSE PLANT CORPORATION. See RECONSTRUCTION FINANCE CORPORATION; CHILE, PERU, under *History*; PUBLIC FINANCE under *Federal Expenditures*.

DEFENSE SUPPLIES CORPORATION. See RECONSTRUCTION FINANCE CORPORATION; PERU under *History*.

DEFENSE TRANSPORTATION, Office of (ODT). Created by executive order, Dec. 18, 1941, the Office of Defense Transportation was charged by the President with responsibility for assuring maximum utilization of the domestic transportation facilities of the nation for the successful prosecution of the war. Joseph B. Eastman, Chairman of the Interstate Commerce Commission, was appointed Director of the agency.

To meet conditions produced by increased traffic, growing equipment stringencies, tightening of the manpower supply, and other factors, ODT in 1943 broadened some of the controls instituted in 1942 and put into effect new measures for conservation of transportation. While growth of war traffic subjected all types of domestic transportation to increasing strain, no serious failures or interruptions of service occurred during the year.

The railways (q.v.), which performed by far the largest proportion of intercity freight transportation service, experienced an increase of 15 per cent in that traffic. Railroad passenger traffic rose by more than 65 per cent over the record total of 1942. To avert threatened congestion of rail freight movement on the western transcontinental lines, the Associate Director of ODT's Division of Railway Transport, in charge of the western region, was vested early in the year with Interstate Commerce Commission powers to divert traffic from heavily burdened to less crowded routes. Authority to divert rail freight traffic was extended to the eastern and southern regions late in 1943.

Rail deliveries of petroleum products to the East Coast reached a peak of over a million barrels a day in July, 1943, most of this oil moving in solid trains of tank cars under ODT supervision. General Orders ODT 1 and 18, requiring heavier loading of freight cars; measures for pooling of refrigerator cars and for utilization of such cars for transport of general freight in the direction of the normal empty movement; arrangements to facilitate leasing of locomotives to roads short of motive power; and other conservation steps helped to avert or alleviate railroad equipment shortages.

In October, 1943, a War Transportation Efficiency Committee, composed of representatives of ODT, ICC, and railroad and shipper organizations, was formed under Director Eastman's chairmanship to direct a campaign for attainment of an additional increase of 10 per cent in efficiency of railroad freight operations. During the year the ODT continued its efforts to relieve crowded travel conditions through campaigns for voluntary curtailment of unnecessary civilian travel on trains and intercity buses, and for cancellation of conventions and similar group meetings not directly related to the war effort.

Numerous joint action plans for pooling use of truck, bus, or taxicab facilities were placed in effect. Advent of an acute gasoline shortage in the Northeast in May, 1943, caused ODT to order sharp emergency reductions in commercial motor vehicle mileage and restriction of wholesale and retail deliveries in that region. The emergency restrictions on bus and taxicab mileage were modified

in August but, owing to the increasing necessity for truck conservation, the restrictions on deliveries were extended to the whole country in October.

In June, 1943, ODT revised its permit system for control of Great Lakes shipping. Principally because of late opening of the navigation season, the volume of iron ore shipped down the Lakes dropped from the record total of 92,000,000 gross tons in 1942 to 84,400,000 gross tons in 1943. The grain movement in United States ships on the Lakes rose, however, from 111,000,000 bushels in 1942 to around 184,000,000 bushels in 1943.

Designation of ODT as claimant agency for domestic transportation under the Controlled Materials Plan of the War Production Board was announced in January, 1943. The agency acts also as claimant for gasoline and rubber for highway use. The Office of Defense Transportation established a regional office in Hawaii in the summer of 1943. See RAILWAYS.

DEHYDRATED FOODS. See AGRICULTURAL COOPERATION; CUBA under *History*.

DELAWARE. A south Atlantic State. Area: 2,057 sq. mi. Population: 266,505 (1940 census); 271,741 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Walter W. Bacon (Rep.), inaugurated in January, 1941, for a four-year term; Lieutenant Governor, Isaac J. MacCollum; Secretary of State, William J. Storey; Attorney General, Clair J. Killoran.

DEMOBILIZATION. See ARMED FORCES.

DEMOCRATIC PARTY. See ELECTIONS; UNITED STATES under *Politics*.

DENMARK. A formerly independent kingdom of northwestern Europe, occupied by German armed forces on Apr. 9, 1940. It comprises the peninsula of Jutland, the two main islands of Zealand and Fyn, and about 200 smaller adjacent islands in the Baltic. The Faeroe Islands (q.v.), an integral part of the kingdom, were occupied by British troops on Apr. 13, 1940, for the duration of the war. Greenland (q.v.), a Danish dependency, remained under the control of the local Danish administration but accepted United States protection for the duration of the conflict. The King of Denmark is also King of Iceland, although the Icelandic Althing (parliament) on May 16, 1941, voted to terminate this personal union at the end of the war and elected a regent during the interim (see ICELAND under *Government*). Capital of Denmark, Copenhagen. King, Christian X, who succeeded to the throne May 14, 1912.

Area and Population. Area, excluding the outlying possessions, 16,576 square miles. Estimated population on June 30, 1941, 3,863,000, including 26,000 in the Faeroe Islands, as compared with 3,844,-

000 at the census of Nov. 5, 1940. The live birth rate per 1,000 inhabitants was 20.5 in 1942 (18.5 in 1941); death rate, 9.7 (10.3). Populations of the chief cities at the 1935 census were: Copenhagen, 843,168; Aarhus, 90,898; Odense, 76,116; Aalborg, 48,132.

Education and Religion. There is no illiteracy. The 4,472 lower schools had 480,000 pupils on Jan. 1, 1938; secondary, professional, and vocational schools, 74,100; the two universities at Copenhagen and Aarhus, 5,700. The 1921 census showed 3,221,843 Protestants, 22,137 Roman Catholics, 5,947 Jews.

Production. Previous to the German occupation, 35 per cent of the working population was engaged in agriculture and dairying and 33 per cent in industry. Commerce and fishing were the other leading occupations. Livestock estimates as of November, 1940, with figures for July, 1939, in parentheses, show the preliminary effects of the German occupation upon Denmark's most important industry: Cattle, 2,976,000 (3,271,000); swine, 2,528,000 (3,182,000); chickens, 11,260,000 (33,296,000). Further drastic reductions in livestock occurred during 1941-43, except for the rabbit population, which increased from an estimated 240,000 in 1938 to about 1,000,000 in 1942. The total output of animal products in February, 1942, amounted to about one-half of the normal pre-war production. Dairy production in the first quarter of 1943 was: Milk, 1,313,400,000 lb.; butter, 47,300,000 lb.; cheese, 9,900,000 lb. Cereal crops totaled about 3,750,000 metric tons in 1942 (2,710,000 in 1941); potatoes, 1,700,000 metric tons in 1942 (an increase of 28.8 per cent over 1941); beet sugar, 306,000 short tons in 1941. Sea fisheries yielded 114,200 metric tons of fish in 1940. Lignite output in 1942 was 1,600,000 tons, a 60 per cent increase over 1941; peat, 4,700,000 tons as against a normal output of 400,000 tons. The higher fuel production was due to the decline of coal and coke imports from Germany.

Foreign Trade. Merchandise imports in 1942 totaled 1,204,800,000 Danish crowns (1,310,400,000 in 1941); exports, 1,038,000,000 crowns (1,276,800,000 in 1941). Imports from Germany were estimated at 843,000,000 crowns, or 70 per cent of the 1942 total, and exports to Germany at 726,600,000 crowns (70 per cent). In 1941, 80 per cent of all Danish trade was with Germany. In the Danish-German clearing account, the balance due Denmark increased by 263,100,000 crowns during 1942 to a total of 1,105,200,000 crowns.

Finance. Budget estimates for the fiscal year ended Mar. 31, 1944, placed current revenue at 718,900,000 crowns (822,400,000 in 1942-43) and current expenditure at 962,500,000 crowns (909,900,000 in 1942-43). The German levy on Denmark to meet occupation costs was reported at 429,500,000 crowns for 1942. Public debt on Mar. 31, 1941, 1,211,600,000 crowns. At the official exchange rate (4.79 crowns equal \$1) in 1942, the crown was equivalent to \$0.2088 (\$0.1931 in 1941).

Transportation. In 1941 Denmark had 3,189 miles of railway line (1,625 miles state-owned) and 32,212 miles of highways. Air lines linked Copenhagen with the chief cities of the continent. Lack of fuel and rubber curtailed virtually all forms of transportation. The speed limit for motor traffic in 1942 was 15 miles an hour. The volume of goods in foreign trade loaded and discharged in Danish harbors dropped to 5,205,000 tons in 1942 from 12,651,000 tons in 1938. In 1942 the number of vessels calling at Danish ports in foreign and domestic trade numbered 45,800; goods discharged,

6,673,000 tons. Two-thirds of all Danish ocean-going ships were outside Denmark at the time of the German invasion; these ships, with more than 5,000 Danish sailors, later entered the service of the United Nations.

Government. The Constitution of June 5, 1915, as amended Sept. 10, 1920, vests executive power in the King acting through a cabinet responsible to the Rigsdag (Parliament). Legislative power rests jointly in the King and Rigsdag. The Folketing (lower chamber of the Rigsdag) consists of 149 members elected for four years by proportional representation. The Landsting (upper chamber) comprises 76 members serving for eight years; 19 members are elected by the Landsting itself and every four years half the remainder is elected indirectly by voters of over 35 years. Premier and Foreign Minister at the beginning of 1943, Eric Scavenius, heading a coalition government of the Social Democratic, Radical, Liberal, and Conservative parties, formed Nov. 10, 1942. These four parties and the Justice League, controlling 137 out of the 149 seats in the Folketing, on July 3, 1940, formally agreed "to abandon all points of disagreement and unite to make sure the independence and integrity promised our country." The Danish Communist party was outlawed in 1941 under German pressure. For developments in 1943, see below.

HISTORY

Gestapo Takes Over. Three and a half years of persistent German efforts to win the Danish Government and people over to willing collaboration with Hitler's "new order" ended in failure on Aug. 29, 1943. On that date the German military commander, Maj. Gen. Hermann von Hanneken, proclaimed martial law. The Scavenius Government immediately resigned. King Christian and Queen Alexandrine were interned in their summer residence near Copenhagen and the King's functions were "suspended." German troops and Gestapo units began rounding up members of the King's households and of the Government, army and navy officers, prominent intellectuals, outspoken patriots, and Jews.

All legislative and executive powers were taken over by the German military commander and by the German Minister to Copenhagen, Dr. Karl Rudolf Werner Best. In open violation of the pledge of noninterference in internal Danish affairs given by Hitler at the time of the German invasion in 1940, Denmark was shorn of every vestige of independence and placed under a harsh military dictatorship directed from Berlin. For the first time the Danish people were exposed to the full impact of the brutal Gestapo methods of punishment and repression.

Denmark had narrowly escaped a similar fate in November, 1942, when the newly formed Scavenius Government rejected several important demands forming part of a German ultimatum (see 1943 YEAR BOOK). The German authorities were anxious to retain a Danish Government in office as a demonstration of the advantages that the other subject nations of Europe might derive from collaboration with Berlin. Accordingly they accepted the Government's promise of more active measures against the leaders of the anti-German underground. On the other hand, the Scavenius Government was supported by the anti-Nazi Danish political parties "as a last attempt to keep some power in Danish hands." King Christian, who was slowly recovering from his serious illness of the preceding autumn, likewise placed his immense prestige behind the Government. (In mid-May the King

was able to resume the powers which he had transferred to Crown Prince Frederick the previous October 27.)

The March Elections. After first informing the Scavenius Government that the Reich could not permit the spring elections to the Folketing, Minister Best on March 8 changed his mind and authorized the holding of the elections on March 23 as a sign of Germany's purely "protective interest" in Denmark. Germany, he indicated, was ready to guarantee the constitution and sovereignty of Denmark "if the people and Government will adopt a suitable attitude."

The Danish democratic parties were restricted in electioneering to the distribution of a leaflet bearing the single word "vote." Nevertheless 2,009,295 votes were cast, representing 90 per cent of the electorate. The democratic parties forming the Government coalition were confirmed in power with overwhelming majorities. The Danish Nazis, who were supported by the German minority in Slesvig, polled 43,277 votes against about 46,000 received by Danish Nazis and minority German candidates in 1939. Votes polled by the democratic parties were (1939 totals in parentheses): Social Democrats, 894,636 (729,619); Conservatives, 421,051 (301,625); Liberals, 376,463 (309,155); Radicals, 175,025 (161,839); Right Union (Justice League), 31,185 (33,783). The Opposition Peasants' party, considered mildly pro-Nazi, got only 24,700 votes, or 23,000 less than in 1939.

The Germans were prepared to interpret the elections as evidence of Danish support for the partially collaborationist Scavenius Government. However this maneuver was forestalled by the declarations of all the major parties that faith in democracy, not faith in the Government, was the central issue. Municipal elections held throughout Denmark on May 6 showed almost identical results. An active election campaign in Copenhagen netted the Danish Nazis only 2 per cent of the total vote.

Growth of Sabotage. The elections demonstrated that the Danish people as a whole could never be induced to follow the handful of Danish Nazis into willing collaboration with Berlin. Moreover the returns convinced the German authorities that a constitutional Danish Government could not be expected to deal effectively with the rising tide of sabotage, which had become a serious problem in 1942.

Allied victories in Russia and North Africa and an R.A.F. daylight bombing of the big Burmeister and Wain shipyards in Copenhagen on Jan. 27, 1943, inaugurated a more formidable wave of sabotage. Within two weeks in February four large Danish industrial plants working on German war orders were destroyed by fire or explosions. Other sabotage attacks interrupted service on railways and highways. German threats to oust the Government led a committee of the government parties to warn the nation on April 4 that continuance of sabotage menaced the degree of self-government which Denmark still retained. The very next night fires broke out in five or more plants in the factory town of Hilleroed, near Copenhagen.

On or about April 9, the third anniversary of the German invasion, General von Hanneken reportedly presented Premier Scavenius with another ultimatum. He demanded that specific Danish officials and industrialists be made responsible for the prevention of sabotage and punished by arrest or possible execution if the incidents continued. Secondly, he insisted that Danish industry be placed under more direct German control, with Danish

business men reporting to a German commissioner as in Norway. While negotiations continued sabotage and other anti-German activities increased, notwithstanding an appeal from King Christian issued in May.

Rejecting the advice of their elders, young Danes flocked into the underground organizations. Illegal newspapers were issued in large numbers, with a steadily mounting circulation. When the Germans in May and June began to strengthen the Jutland garrison and intensify preparations to resist an Allied landing, the saboteurs concentrated their efforts upon German troop trains, railways, and barracks. Attacks upon German soldiers and Danish Nazis became more frequent. Under orders of the Scavenius Government, Danish police arrested and imprisoned many Danes engaged in these activities. This policy aroused a rising public clamor for an administration that would be more militant in resisting German pressure. Meanwhile the German authorities pressed for more drastic measures against the underground.

The August Crisis. The Swedish Government's action in barring further passage of German troops and supplies en route to Norway and Finland, effective August 15, brought the situation in Denmark to a head. Sweden's move forced the Germans to rely exclusively upon Danish transportation facilities to supply and reinforce their garrisons in Norway. With an Anglo-American invasion impending, the curbing of sabotage in Denmark became imperative to the German high command.

On August 4, soon after the decision of the Swedish Government was transmitted to Berlin, the German Minister in Copenhagen demanded that all Danish saboteurs be handed over for trial by German courts. When the Danish Government refused and Premier Scavenius on August 9 offered his resignation, Dr. Best shelved the German demand for the time being. Meanwhile news of the German demand and of new German atrocities in Norway had set off a wave of even more destructive sabotage, accompanied by strikes and attacks upon German soldiers. Clashes between Danish crowds and German soldiers in Esbjerg and Aalborg led the Germans to impose a state of siege in those cities in mid-August. Similar restrictions were imposed upon the island of Fyn after a street battle between German and Danish soldiers in Odense.

On August 20, members of the Government, Parliament, and leaders of the government parties met in Copenhagen to consider their course. They decided not to yield to German demands for the trial of saboteurs in German courts. But they approved a formal Government appeal, issued August 21, for an end to "unlawful" anti-German actions. The appeal warned the Danes that the Germans might cut off imports of food and fuel, with devastating results on Danish life. The aroused Danes disregarded this warning. Anti-German demonstrations and riots spread to Copenhagen and other cities and towns. The Germans rushed large numbers of troops into Copenhagen and other centers. They made numerous arrests and extended the emergency decrees. This only added fuel to the fire of Danish resistance.

The German Minister then presented the Scavenius Government with the following demands: (1) Declaration of a state of siege applying to all Denmark, (2) creation of special tribunals empowered to sentence Danish saboteurs to death, (3) delivery to the Germans before September 1 of all firearms and ammunition in Danish possession, (4) imposition of a nationwide curfew from

8:30 p.m. to 6:30 a.m. for the duration of the state of siege, (5) levying of a million-crown fine on the people of Odense for anti-German outbreaks, (6) punishment of every Dane assaulting other Danes friendly to the Germans, (7) a ban on strikes and on public or private gatherings of more than five persons, (8) complete German control of the Danish press.

These demands were also rejected by the Scavenius Government. The Cabinet's decision was said to have been unanimous, after King Christian threatened to abdicate if the demands were accepted. The German Minister was then called to Berlin (about August 27). On August 28 telephone and telegraph communication from Denmark was cut off. At 4:10 a.m. the next morning General Hanneken proclaimed martial law and overthrew the constitutional regime in Denmark on the ground that the Government had been unable to maintain order.

The proclamation banned until further notice all strikes, private or public assembly, and the use by Danish citizens of mail, telephone, and telegraph services. A dusk to dawn curfew was imposed. Danish authorities and officials were ordered to continue loyal fulfillment of their duties in accordance with regulations issued by the German military authorities. The Danes were warned that any disobedience would be met by ruthless use of arms. German military and civil officials were installed in all key posts of the Danish civil administration.

Danish Resistance. The Danes fought much more bitterly against the crushing of their civil government than they had against the original German invasion in 1940. On orders of the commander in chief of the tiny Danish navy, 20 small ships were reportedly scuttled in Copenhagen harbor, while nine others escaped to Swedish ports. Danish soldiers in Copenhagen and the provinces were said to have blown up fortifications and resisted the Germans until overpowered.

Disarming of these troops and mass arrests of Danish patriot leaders failed to end resistance. Many Danish policemen refused to swear allegiance to the German military commander. Thereupon German Elite Guard troops and Gestapo agents took over the police stations. Strikes paralyzed nearly a dozen provincial towns, despite von Hanneken's threat that strikers would be executed. Sabotage increased in the face of the establishment of German courts-martial for the summary trial of saboteurs, with death prescribed for serious offenses.

On September 1 General von Hanneken proclaimed a state of emergency in place of the more drastic martial law decree. At the same time Dr. Best made the first of several efforts to reestablish a Danish constitutional regime that would accept many of the controls imposed under German military rule. The King and the members of the former Scavenius Government rejected all advances.

Continued sabotage led the Germans to restore martial law on September 3. Two days later they decreed the death penalty not only for sabotage and espionage but also for sheltering persons engaged in anti-German activities and for failing to inform the German authorities of plans to obstruct the German war effort. A subsequent decree imposed the death penalty for the possession of arms or ammunition. Heavy fines were levied on Copenhagen in reprisal for killings of German soldiers.

On September 28 General von Hanneken was reported to have been replaced as military commander in Denmark by Gen. Kurt Daluge, a high

Gestapo official who as Acting Protector of Bohemia and Moravia had inflicted a bloody reign of terror upon the Czechs. This report coincided with a ruthless purge of the 6,000 Danish Jews. Despite vigorous protests by King Christian and representatives of the five leading Danish political parties, the Jews were rounded up and shipped off at short notice to Germany and Poland. Their homes, furniture, and businesses were confiscated without compensation. More than 1,000 Danish Jews, however, managed to escape to Sweden with the connivance of the Danish police.

Early in October the Germans released from internment the Danish soldiers and sailors captured on August 29, even though the latter refused to sign pledges binding them to abstain from anti-German activities. This gesture was accompanied by the disarming of the Danish police and the internment of many police officers for failing to prevent the escape of Jews to Sweden. Many faculty members of the universities of Copenhagen and Aarhus were arrested for displaying pro-Jewish sympathies. Meanwhile the underground warfare waged against the Germans steadily increased in bitterness and effectiveness. The Gestapo, aided by the Danish Nazis, resorted more and more openly to the cruel methods of repression in vogue in other German-occupied countries.

See BRIDGES; REFUGEES; SOCIALISM; SWEDEN.

DENTISTRY. Most of the year's activities in dentistry have been directed toward the prosecution of the war and represent the natural evolution of trends already noted for 1942. Only in the field of dental education has there been radical rearrangement and change.

Education. Early in the year both armed forces indicated that plans were being formulated to change radically the set-up in both dental and medical schools. The proposed plans covered all phases of training beyond high school: basic pre-professional college, preclinical and clinical areas. Although there was a general similarity between the Army and Navy proposals, the pre-professional schedules differed materially as to the amount of credit to be required, the length of the school year divisions (semester and trimester), and the subject content. Editorially and otherwise (*J.A.D.A.*, April, 1943) it was intimated that dentistry was already operating an accelerated, highly efficient program of training and that the schools had promptly complied with all requests of the armed services. Furthermore, it was the opinion that the proposed plans were unduly costly, both financially and administratively, and that "in the end it will transpire that there was really no occasion for it."

However, by the middle of the summer most of the dental schools had signed agreements with the Army and Navy, and by the end of the year thirty-eight schools were operating under contracts with one or both of the services. A typical example follows: As of Nov. 1, 1943, this school had an enrollment of 318 (317 as of the same date in 1942); of these 109 are in training under Navy direction, 184 under the Army, and 25 are civilian students. Three of the last group are women, the remainder are aliens or ineligible for service. Both Navy and Army groups are in uniforms appropriate for their rank and service; each student is paid slightly in excess of \$55 per month with additional allowances for room, board, books, instruments, and tuition. Students live for the most part close to the school wherever places are available but cannot leave the designated school area (50-mile zone) without permits. Many other units have

been able to supply living quarters on the school campus. There have been no noteworthy changes in the faculty personnel and educational program.

Under the last revision of the Harvard plan, to become effective with the admission of this year's first-year class, 15 students will be admitted to the dental course each year but as a part of the Harvard quota of 125 taken into the first-year course in medicine. Dental students will be treated exactly as if they were medical students for the first two scholastic years. The last two years of the dental course will be devoted to an intensive training in technical and clinical dentistry. Successful completion of the four scholastic years as outlined will rate the D.M.D. degree (accepted equivalent of the D.D.S. degree in dentistry awarded by most dental schools). Satisfactory accomplishment of one and one-half scholastic years of training in clinical medicine in addition will secure the M.D. degree; it will, therefore, be possible to earn both degrees at the end of five and one-half years of study in the combined course.

Organized Dentistry. General meetings of national professional societies in many instances have been replaced by executive sessions for the transaction of necessary and routine business. The American Dental Association met in Cincinnati under such circumstances in early October. Many other groups correlated their executive activities accordingly. Well attended regional meetings (as in Chicago, New York, and elsewhere) with well arranged programs containing informative and timely papers and instructive clinical demonstrations still supply excellent and generous opportunities for the exchange of ideas and acquirement of essential information about the current progress in the recognition and treatment of dental diseases. A small but representative group of United States dentists participated in the Medical-Dental Convention in the City of Mexico in March. The Kellogg Foundation supported a group of 21 Hispano-American dentists for six months study and observation of professional study and practice in this country. Both of these enterprises and others have had the efficient support and backing of the active Pan-American Committee of the American Dental Association. Sixty dentists met in February to promote the organization of industrial dentists which was consummated in Cincinnati in October.

Dental Practice and Research. At the close of 1942, 12,700 dentists were in Army service. The quota for 1943 called for 9,500 in addition to these, only about 3,500 of whom could be supplied even by the accelerated programs of the schools; the balance of about 6,000 will have to come from dentists engaged in private practice. Only a few of these can be replaced in private practice by graduates not eligible for military service so that there is very little hope of lessening the heavy pressure on the private practitioner until demobilization begins. The increased personnel in both the Army and Navy has been recognized by elevating the two ranking officers in those services to that of Major General and Vice Admiral respectively.

Interest is growing in military dentistry, especially in the output of textbooks designed for use in training the dentist for the armed services; so far there has been no noteworthy expansion of pertinent periodical content. Otherwise periodical literature deals mostly with routine material concerned with clinical practice. Research, largely dormant, relates to use of the sulfa drugs, exploitation of the synthetic acrylic resins, and search for agents to inhibit dental decay. In the last respect the emphasis is still given to the fluorides.

Bibliography. Dewey and Anderson, *Orthodontics*; Fry et al., *Maxillo-facial Injuries*; Goldman, *Periodontia*; Kennedy, *Partial Denture Construction*; Miller, *Periodontia*; Salzman, *Orthodontics*; Science Press, *Fluorine and Dental Health*; Winter, *Oral Surgery*.

EDWARD H. HATTON.

D'ENTRECASTEAUX ISLANDS. See PAPUA.

DEPARTMENT STORES. See BUSINESS REVIEW.

DEPORTATIONS. See BELGIUM, BULGARIA, DENMARK, FRANCE, GREECE, NETHERLANDS, NORWAY, and POLAND under *History*; IMMIGRATION.

DEPOSITS. See BANKS and BANKING.

DESTROYER ESCORT. See NAVAL PROGRESS, text and photograph; ELECTRICAL INDUSTRIES; WORLD WAR.

DETENTION HOMES. See JUVENILE DELINQUENCY.

DEVELOPMENT BANK. See PUERTO RICO under *History*.

DIET. See topics listed under NUTRITION.

DIMOUT. See CIVILIAN DEFENSE, OFFICE OF.

DISASTERS. See ACCIDENTS; AERONAUTICS; EARTHQUAKES; FIRE PROTECTION; FLOODS; HURRICANES; RAILWAYS; CHINA, GREAT BRITAIN, and INDIA, under *History*. For Disaster Relief, see CIVILIAN DEFENSE, OFFICE OF; RECONSTRUCTION FINANCE CORPORATION; RED CROSS.

DISCIPLES OF CHRIST. This communion, known also as the Churches of Christ and Christian Churches, sprang from a movement for Christian unity, which arose in American Presbyterian circles at the beginning of the 19th century, under Barton W. Stone, in Kentucky, and Thomas and Alexander Campbell in Western Pennsylvania. This is the largest religious body having its origin in America. It was fifth among Protestant communions in the United States in 1943. In policy the churches are congregational. There are six major agencies of the communion: The United Christian Missionary Society; Board of Higher Education; Association for the Promotion of Christian Unity; Pension Fund; National Benevolent Association; and Board of Church Extension, besides the missionary societies of the several states and provinces of Canada. These agencies are corporations and are affiliated with the International Convention of Disciples of Christ which meets annually. The general missionary work both home and foreign of the churches is administered through the United Christian Missionary Society, with headquarters at 222 South Downey Avenue, Indianapolis, Ind. Its board of managers of 120 is composed of 60 men and 60 women. The foreign missionary work in 1943 embraced the Belgian Congo in Africa, China, India, Jamaica, Japan, Mexico, Philippine Islands, Puerto Rico, Argentina, Paraguay, and Batang, on the border of Tibet. However, because of the war, work in Japan and the Philippine Islands is suspended.

Statistics of the communion show that during the year there were 5,439 baptisms in the foreign fields. The 338 mission schools had a total enrollment of 14,386. The communion maintained 11 hospitals and 16 dispensaries which gave 516,277 treatments. The Church Extension Fund amounted to \$2,841,987 with outstanding loans to 404 churches. The Pension Fund for the ministry showed assets of \$3,655,264. During the year 106 young people's conferences were held. Work in America was conducted among the French, Highlanders, European immigrants, Negroes, Orientals, Spanish-Americans, and Mexicans. The National Benevolent Association maintained six homes for children, and an equal number of homes for the aged. In 1943, 26 Colleges, Universities, Bible Col-

leges, and Foundations cooperated with the Board of Higher Education. The total church membership throughout the world in 1943 was 1,842,123; and in the United States and Canada 1,679,012. The Bible School enrollment for the world was 1,067,302, and for the United States and Canada, 1,008,588. Contributions, missionary, benevolent, and educational, reported for the fiscal year in the United States and Canada totaled \$5,505,779.

Among the periodicals published by the communion are *World Call*, *The Christian Evangelist*, *Christian Standard*, and *Front Rank*. The president of the International Convention was Dr. C. E. Lemmon, Columbia, Mo. No convention was held during the year.

DISEASES. See CHILDREN'S BUREAU; DENTISTRY; MEDICINE AND SURGERY; PSYCHIATRY; PUBLIC HEALTH SERVICE; VETERINARY MEDICINE; VITAL STATISTICS.

DISINFECTANTS. See CHEMISTRY under *Insecticides and Disinfectants*.

DISTRICT OF COLUMBIA. An area conterminous with the city of Washington, seat of the U.S. Government. Area: 69 sq. mi. Population: 658,018 (1940 census); 839,013 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to the District of Columbia and each of the 48 States has been assembled in comparative tables which appear in the following articles. *ROADS AND STREETS*; *SCHOOLS*; *SOCIAL SECURITY BOARD*; *TAXATION*; *UNIVERSITIES*; and *VITAL STATISTICS*. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Officers. The District is administered by a three-man board of Commissioners, two of whom are appointed by the President and confirmed by the Senate for three-year terms. The third Commissioner is selected by the President from time to time from the U.S. Army Corps of Engineers. The Commissioners in 1943 were: John Russell Young, President; Guy Mason; and Col. C. W. Kutz, Corps of Engineers, U.S.A.

DIVORCE. See LAW under *Decisions Concerning the Federal System*.

DJEBEL DRUSE. See SYRIA AND LEBANON.

DOBRUJA. See BULGARIA under *Area*.

DOCUMENTARY FILMS. See MOTION PICTURES; PHOTOGRAPHY; also COORDINATOR OF INTER-AMERICAN AFFAIRS.

DODECANESE ISLANDS. See AEGEAN ISLANDS, ITALIAN; GREECE under *History*; WORLD WAR under *The Balkans*.

DOGS. Transcending anything that happened in the show ring in 1943 was the heroism of the dogs serving with the Army, Navy, Marines, and Coast Guard in many theaters of war. Breeders once again centered their activities around Dogs for Defense, Inc., which has contributed greatly to our national war effort by procuring obedient dogs for service with our armed forces at home and abroad.

Exhibitors, despite the handicaps of food and gasoline rationing, had a successful, albeit a limited, season. The biggest bench show of the year, Westminster, held in Madison Square Garden, furnished a sensational surprise when Champion Pitter Patter of Piperscroft, who never had gained an all-breed victory, went best in show. The imported miniature poodle, owned by Mrs. P. H. B. Freling-

huysen of Morristown, N.J., was the first of its breed ever to figure in the final judging at a Westminster show. Best American-bred was the Irish water spaniel Ch. Mahoney's O'Toole, owned by Mrs. Charles M. Wynne of Highland Park, Ill.

Mrs. George A. Anderson's whippet, Ch. Flornell Glamorous, a consistent winner all year, proved best in the Katonah show, which was transferred to Rye, N.Y.

In the field, A. G. C. Sage's liver and white pointer, Ariel, regained the bird dog championship and the Labrador Shed of Arden took retriever honors to give Lieut. Paul Bakewell 3d the prize for the fourth straight year. High spot of the season for springers was the Fisher's Island competition, which was won by Captain and Mrs. James Simpson's Stoneybroke Sheerbliss.

THOMAS V. HANEY.

DOMESTIC OPERATIONS BRANCH. See WAR INFORMATION, OFFICE OF.

DOMESTIC WORKERS. See LABOR CONDITIONS under *Women Workers*.

DOMINICA. See WINDWARD ISLANDS.

DOMINICAN REPUBLIC. A West Indian state, occupying the eastern two-thirds of the island of Hispaniola (Haiti). The name of the capital was changed from Santo Domingo to Ciudad Trujillo, Jan. 9, 1936.

Area and Population. Area, 19,325 square miles; population, estimated in 1941 at 1,768,163. About 40 per cent of the inhabitants are white (mainly of Spanish descent), 40 per cent mixed, and 20 per cent Negro. American citizens, including Puerto Ricans, in the republic in 1941 numbered 3,158; other foreigners in 1935—Haitians, 52,657; British subjects, 9,272; Spaniards, 1,572. Populations of the chief cities (1935 census): Ciudad Trujillo, 71,297; Santiago de los Caballeros, 33,919; San Pedro de Macoris, 18,889; Puerto Plata, 11,777.

Defense. As of Jan. 1, 1941, there were 3,035 officers and men in the active army (including air forces), and 1,675 trained reserves. The municipal police, organized as a national constabulary in 1936, form an auxiliary branch of the army. There are four coastal patrol vessels. National defense budget for 1942, \$2,114,000. A U.S. naval mission was contracted for Jan. 25, 1943, for four years.

Education and Religion. Four-fifths of all adults were illiterate at the 1935 census. At the beginning of 1943 there were 863 primary schools with 123,641 pupils, 16 secondary schools with 3,133 pupils, 57 vocational schools with 3,702 pupils, and 5 special night schools for illiterate adults with 584 pupils. The University of Santo Domingo had about 350 students. In 1942 a National Conservatory of Music and Declamation was opened in Ciudad Trujillo. An eight-year program to teach English to high school students was launched in 1943. About 97 per cent of the Dominicans are Roman Catholics.

Production. Agriculture supports about four-fifths of the population. Sugar cane is the chief crop, yielding 530,000 short tons of sugar from 225,000 acres in 1941-42. In 1943 there were 14 sugar centrals with 70,000 workers and a capital investment of \$70,000,000. Cacao exports in 1941 totaled 19,287 metric tons; coffee, 201,821 bags (of 132 lb.). Yucca starch, placer gold, corn, rice, cattle, and bananas are other exports. Products for home consumption include potatoes, beans, onions, peanuts, pineapples, etc. The forests produce cabinet and dye woods.

Foreign Trade. Imports in 1942 totaled \$11,480,-

857 (\$11,739,031 in 1941); exports, \$20,040,000 (\$17,123,937 in 1941). Values of the chief 1941 exports: Raw sugar, \$7,830,000; cacao, \$2,250,000; coffee, \$1,473,000; molasses, \$1,272,000; yucca starch, \$975,000. The United States supplied 75.4 per cent of the 1941 imports (66.5 in 1940) and took 51.4 per cent of the exports (24.6 in 1940). Sugar exports for the 1942-43 season were 189,920 metric tons, valued at \$10,361,521. The entire crop was sold to the British Government through the U.S. Commodity Credit Corporation.

Finance. In 1942 governmental revenues totaled \$14,943,062 and expenditures \$12,787,925, leaving a surplus of \$2,155,136. The foreign funded (dollar) debt totaled \$14,316,000 on Feb. 28, 1942; internal (floating debt), about \$3,265,104. The Dominican peso is equal to one U.S. dollar.

Transportation. In 1941 the government decided to suspend service on 134 miles of common-carrier railway lines and convert the roadbeds into highways. There were in 1943 about 2,300 miles of roads, which handled the bulk of overland traffic. Pan American Airways provides connections with San Pedro de Macoris for the Caribbean circuit. There is a deep-water port at Ciudad Trujillo and harbors for smaller vessels at Azua, Barahona, La Romana, Monte Cristi, Puerto Plata, Sanchez, and San Pedro de Macoris. To overcome the wartime shipping shortage, the Government in 1943 placed in operation small motor-driven schooners, built in the republic with credits and materials furnished by the United States.

Government. The Constitution of 1929, as revised in 1934 and on Dec. 16, 1941, vested executive power in a President elected for five years and legislative power in a Congress of 16 Senators and 30 Deputies, elected for four years by direct suffrage of literate males and females. However, Gen. Rafael Leonidas Trujillo Molina's Dominican party is the only political organization permitted. Trujillo, who headed a successful military revolt, was President from Aug. 16, 1930, to Aug. 16, 1938, when he was succeeded by his own candidate. Trujillo was reelected President without opposition on May 16, 1942, and assumed office for another five-year term on May 18. The republic, aligning itself with the United States, declared a state of war with Japan December 8 and with Germany and Italy Dec. 11, 1941. For 1943 developments, see below.

History. No important news of political developments in the republic seeped through the censorship during 1943. The Dominican Government continued its cooperation with the United States and the United Nations, as was acknowledged by President Roosevelt in accepting the credentials of the first Dominican Ambassador to Washington early in May. (The diplomatic missions exchanged by the two countries were elevated from ministerial to ambassadorial rank by mutual agreement.)

Economic conditions continued fairly satisfactory according to available reports. The agricultural expansion and diversification program inaugurated by the Trujillo dictatorship some ten years earlier bore fruit at an opportune time. It made the republic self-sufficient in foodstuffs at a time when Puerto Rico and other neighboring territories suffered severely from food shortages. The Dominican Republic was included in the drive for increased food production in the Caribbean area financed by the U.S. Board of Economic Warfare and Commodity Credit Corporation. During 1943 the Commodity Credit Corporation contracted for all surplus food produced in the Dominican Republic for shipment to Puerto Rico and other food-deficient areas.

Among the projects for increased food production completed during the year was a seven-mile irrigation canal near Las Matas de Farfan in the frontier province of Benefactor, designed to irrigate almost 30,000 acres near the Haitian border.

See SPANISH-AMERICAN LITERATURES; WORLD WAR; PAN AMERICANISM.

DONATIONS. See PHILANTHROPY.

DORNIER. See AERONAUTICS under *Axis Types*.

DOUGLAS A-20, C-54, SBD, etc. See AERONAUTICS under *Types* and *American Transports*.

DRAFT. For the United States draft, draft deferment, etc., see SELECTIVE SERVICE SYSTEM and the topics there referred to. For *Draft Dodgers*, see the above and MEXICO under *History*. For *Foreign Military Draft*, see under CONSCRIPTION. For *Draft of Labor*, see COMPULSORY LABOR.

DRAMA. See THEATER; also, RADIO PROGRAMS. For published plays, see LITERATURE, AMERICAN AND BRITISH, and articles on foreign literatures.

DRUGS. See CHEMICAL INDUSTRY; CHEMISTRY under *Drugs*; FOOD AND DRUG ADMINISTRATION; MEDICINE; PUBLIC HEALTH SERVICE. For *Drug Addiction*, see NARCOTIC DRUGS CONTROL.

DRY-DOCKS. See PORTS AND HARBORS.

DUTCH EAST INDIES. See NETHERLANDS EAST INDIES.

DUTCH ELM DISEASE. See INSECT PESTS.

DUTCH GUIANA. See SURINAM.

DUTCH WEST INDIES. See CURAÇAO; SURINAM.

DYES. See CHEMISTRY.

DYSENTERY. See MEDICINE.

EARTHQUAKES. The usual number of earthquakes were reported during the year but practically none of them were of a destructive character. The most destructive, from the point of view of lives lost, was on June 20 in Turkey. Following foreshocks during the previous night and accompanied by torrential rain, a severe earthquake shook the beautiful, rich, fruit-growing district just to the east of the Gulf of Ismid, on either side of the Istanbul-Ankara Railway about sixty miles east of Istanbul. The epicenter of the shock was near the town of Adapazar, where most of the buildings were wholly or partly wrecked. Other towns more or less affected were Geyve, Arefie, and Hendek, the latter twenty miles east of Adapazar. Nearly all the villages in the district suffered. The shock was felt severely in Istanbul, where some apprehension was caused by walls collapsing. The Constantine Pillar in old Istanbul, dating from the fourth century, is reported to have been damaged. Adapazar is a town of about 20,000 population. About 2,000 were killed.

RICHMOND T. ZOCH.

ECONOMIC COOPERATION, Commission for. See MEXICO under *History*.

ECONOMIC MOBILIZATION. See the topics listed under MANPOWER and WAR MOBILIZATION.

ECONOMICS. See BUSINESS REVIEW; FINANCIAL REVIEW; LABOR CONDITIONS; LIVING COSTS AND STANDARDS; POSTWAR PLANNING, ETC. For books and research see LITERATURE; PHILANTHROPY. For economic conditions see countries under *History*.

ECONOMIC STABILIZATION, Office of (OES). The function of the Office of Economic Stabilization is to provide over-all direction and coordination for the

Government's program of stabilizing wages and living costs. The Director is assisted by a Board composed of the heads of agencies concerned with price and wage control and representatives of labor, management, and farmers appointed by the President. Because it is concerned primarily with policy making, the Office of Economic Stabilization operates with a very small staff.

The Office was established on Oct. 6, 1942, by Executive Order, with former Justice James E. Byrnes of the Supreme Court, as Director. On May 29, 1943, Mr. Byrnes resigned to become Director of the Office of War Mobilization, and Fred M. Vinson, who had been Associate Justice of the Federal Court of Appeals for the District of Columbia and Chief Judge of the Emergency Court of Appeals, was appointed to succeed him. See BUSINESS REVIEW.

ECONOMIC WARFARE. See GREAT BRITAIN under *History*; the article which follows.

ECONOMIC WARFARE, Office of (OEI). During the first six months of 1943, certain programs of the Government in the field of foreign economic operations were carried on by the Board of Economic Warfare. By Executive Order of July 15, 1943, the President created the Office of Economic Warfare and transferred to it the functions of the BEW. On Sept. 25, 1943, the President consolidated all Federal foreign economic operations by merging several agencies, including the OEI, into the Foreign Economic Administration (q.v.).

Until superseded by the Office of Economic Warfare in mid-July of 1943, the Board of Economic Warfare continued operations it had initiated in the preceding year on the foreign economic front. From foreign sources came increasing supplies of raw materials to keep domestic reservoirs above the danger line while, concurrently, the exercise of greater selectivity in exports to friendly nations was made necessary by critical shipping and supply situations. Meanwhile, behind-the-scenes preparations of offensive strategy called for careful documentation of enemy economic strengths and weaknesses, to aid in plotting blockade policy and to assist the military in selecting specific targets for offensive action. BEW policy was administered by three Offices—Imports, Exports, Economic Warfare Analysis.

Office of Imports. The United States took a bad initial blow in materials supply when Japan invaded the Far East. Lost to United States commerce almost overnight were 60 per cent of its normal tin supplies, 95 per cent of its quinine, 60 per cent of its hard fiber, valuable sources of fats and oils, practically all of its rubber, and, with the closing of the Burma Road, important sources of tungsten, hog bristles, silk, and other vital supplies. Relief resources were uncovered in other areas of the world and imported commodities—many of which were flown in to meet supply deadlines—stopped the drain on domestic stockpiles.

Upwards of 100 purchase programs, involving many individual items from 40 different countries or areas, were directed by the Office of Imports in its around-the-world job of commodity procurement to keep the wheels of war industry turning. Minerals and metals, foodstuffs, textiles and fibers, and a long list of miscellaneous commodities were the principal goods imported. At the close of the fiscal year, June, 1943, the volume of development and procurement operations was running at an annual rate of around one-and-a-half billion dollars—the vast majority of which was handled through normal commercial import channels.

Office of Exports. Necessary wartime controls over shipments leaving the United States were directed by the Office of Exports. The controls, effectuated through a licensing system, were necessary to protect United States supplies of strategic materials, and at the same time to see that permitted exports went as far as possible in meeting the war-economy needs of friendly countries.

Export controls were applied to some 2,500 commodities and commodity groups, flowing from about 16,000 United States export concerns to more than 140 different country destinations and thousands of individual consignees—all of whom were screened against the "blacklist" of Axis suspects. The Exports Office examined export documents at the rate of two million annually—some 6,000 to 7,000 each business day. Commercial houses handled almost 100 per cent of the actual exportation.

Office of Economic Warfare Analysis. Accurate information about the industrial economy of all countries, particularly those under Axis domination, is vitally necessary for waging successful economic warfare. Picked up—a piece here, a bit there—and assembled in an action-index by the Office of Economic Warfare Analysis, such information is the foundation for basic strategy in economic offensives. Equally important, this information in military hands helps Army and Navy officials brief bomber crews for offensive action over enemy assembly plants, railway terminals, power plants, other strategic industrial arsenals.

Working closely with the British Ministry of Economic Warfare, analysts prepared measures for the guidance of blockade operations in neutral countries adjacent to the Axis. Commodity leaks to the enemy were thus plugged and, coincidentally, important information obtained for use by the Department of State in keeping its "blacklist" current. Further, the success of the secret job of preclusive buying—locking up materials in neutral countries to keep them from the Axis—hinges largely on the positive accuracy of analyses made of enemy economies.

LEO T. CROWLEY.

ECUADOR. A republic of South America. Capital, Quito.

Area and Population. The boundary between Ecuador and Peru was in process of demarcation in 1943 in accordance with the settlement reached in 1942 (see 1943 YEAR BOOK, p. 203). The total area previously claimed by Ecuador was estimated at 276,007 square miles, including the Galapagos Islands (2,868 sq. mi.). The latest population estimate was 3,085,871 (Jan. 1, 1942) (about 10 per cent whites, 39 per cent Indians, 41 per cent mixed, and 10 per cent Negroes and Orientals). Estimated populations of the chief cities: Quito, including rural areas, 215,921; Guayaquil, 180,000; Cuenca, 48,300; Ambato, 25,200.

Defense. As of Jan. 1, 1941, Ecuador had 8,313 men in the active army (including 272 in the air force) and 40,000 (estimated) trained reserves. There were a few small naval vessels. The defense budget for 1943 was 35,900,000 sucres (24 per cent of the total budget). United States naval and military aviation missions were engaged Dec. 12, 1940, for four-year terms. See *History*.

Education and Religion. Although primary education is nominally free and compulsory, the Indian and mixed races are largely illiterate. In 1940-41 there were 316,749 primary, 8,957 secondary, and 1,755 university students enrolled. Roman Catholicism is the dominant faith but there is no state religion.

Production. Agriculture supports some 90 per cent of the population. The chief crops, in order of importance, are: Cocoa beans, 294,764 quintals (of 101.4 lb.) in 1942; coffee, 258,000 quintals in 1941; rice, about 2,000,000 quintals in 1943; sugar, 12,320 short tons in 1942. Bananas, cotton, tobacco, corn, lentils, and other vegetables and fruits are grown. The important forest industries yield vegetable ivory and such strategic materials as rubber, balsa wood, cinchona bark, kapok, and tannin. Production of all the latter items expanded rapidly as a result of war demands. Latest livestock estimates: 2,500,000 cattle, 3,500,000 sheep and goats, 3,200,000 swine, and 1,200,000 horses. Gold, copper, and petroleum are the principal minerals. The petroleum output was 95,670,784 gal. in 1942 (65,882,249 in 1941). In 1941, 17,000 kilos of gold-bearing cyanide precipitates, 13,982,000 kilos of copper concentrates, and 120,000 metric tons of crude oil were exported. Straw hats, textiles, shoes, paper, leather, and cement are leading manufactures.

Foreign Trade. Imports in 1942 were equivalent to \$1,372,767 in United States currency; exports, \$2,059,933. In 1941, imports totaled 149,520,000 sucres; exports, 199,680,000 sucres. The United States supplied 73.8 per cent of the 1941 imports and purchased 73 per cent of the exports. Cocoa, coffee, petroleum, gold, Panama hats, bananas, and rubber are the chief exports.

Finance. Estimates for 1943 balanced ordinary expenditures and receipts at 150,000,000 sucres (119,567,000 in 1942). Two special 1943 budgets aggregated 9,383,000 sucres. The actual budget surplus in 1942 was about 11,000,000 sucres. In 1941 actual revenues totaled 109,001,000 sucres; expenditures, 108,365,100 sucres. Public debt on Dec. 31, 1942: Internal, 36,235,928 sucres; external, \$29,473,738. The sucre (official rate) exchanged at an average of \$0.06667 in 1941 and \$0.06949 in 1942. A decree of July 13, 1943, fixed the buying rate for dollar exchange at 13.50 sucres to the dollar (instead of 13.70 to the dollar) while the selling rate remained stable at 14.10 sucres to the dollar. The circulating medium increased from an average of 155,249,422 sucres for 1937-39 to 387,484,683 sucres on Dec. 31, 1942.

Transportation. Ecuador in 1943 had 4,231 miles of highways (one-sixth paved). The Ecuador section of the Pan American Highway and other roads were under construction. There were over 775 miles of railway line. Both Quito and Guayaquil are linked with the inter-American air network. Guayaquil is the principal port.

Government. The governmental situation has been confused since the *coup d'état* of 1925, when military rule was established. A new Constitution was promulgated in 1929 but continual friction between President and Congress provoked frequent revolutionary outbreaks and a succession of provisional governments, ruling largely by decree. On Sept. 27, 1935, the 1929 Constitution was annulled and the 1906 Constitution provisionally restored. A Constituent Assembly adopted a new Constitution Dec. 1, 1938, but the Congress elected on Jan. 15, 1939, promptly annulled it and the government restored the 1906 Constitution with certain reservations. President in 1943, Dr. Carlos A. Arroyo del Río (Liberal Radical), who assumed office Sept. 1, 1940. The Liberal Radical party won the elections to the Chamber of Deputies held May 11, 1941. The Cabinet as reorganized Aug. 20, 1941, was composed mainly of Liberal Radicals, with the Conservative and Socialist parties also represented. For 1943 developments, see below.

HISTORY

Political Events. Despite growing political agitation inspired by the approach of a Presidential election in 1944, President Arroyo del Río remained in control of both Government and Congress during 1943. During the regular session of Congress ended October 8, the extraordinary war powers conferred upon the President in 1941 were extended until August, 1944. Six aspirants were said to be seeking Presidential nominations, including former President José María Velasco Ibarra, who was forced out of office in 1935 when he attempted to assume dictatorial powers. A revolt by supporters of Velasco Ibarra among sailors of the Naval Hydrographic Service took place in the town of Puna on August 23, but collapsed when the townspeople failed to support it, according to the Ecuadoran Government. The rebellious sailors were arrested. A group of dissident Liberal Radicals campaigning for Congress was arrested in Ambato and Quito on February 20 and charged with political conspiracy.

Economic Conditions. The relatively stable political conditions prevailing during the year were attributed in part to an economic boom that developed in spite of the curtailment of shipping services and the scarcity of essential imports. The boom grew out of the wartime demand for balsa wood, rubber, cinchona bark, petroleum, and other strategic minerals and the economic stimulus provided by the establishment of a United States naval base at Salinas in 1942 and by the expenditure of United States funds and credits on various other Ecuadoran projects (see below). The difficulty of importing machinery and supplies from the United States forced the South American Development Co. to curtail its gold-mining operations at the beginning of June, forcing an estimated 25,000 men to transfer to more vital wartime occupations.

Heavy exports and curtailed imports caused gold and foreign exchange reserves to climb to record levels. However the improved exchange position of the sucre was accompanied by an unhealthy expansion of currency and a rapid rise in prices and living costs. After governmental price control measures had proved ineffective, the President in mid-1943 removed all limitations on imports, revised the dollar-sucre exchange rate (see *Finance*), and required the banks to invest at least 20 per cent of their deposits in 3 per cent gold certificates of the Central Bank. These anti-inflationary measures proved somewhat more effective than direct efforts to enforce price ceilings. As a result of the United States priority system and shipping difficulties, Argentina in April replaced the United States as the principal supplier of Ecuadoran imports.

U.S. Relations. Ecuador's close collaboration with the United States was furthered by the visit of Vice-President Henry Wallace to Ecuador in April and by extended United States financial, technical, and military aid.

The Ecuadoran Defense Minister and high army, navy, and air force officials made a four-day inspection of the U.S. Caribbean Defense Command late in May at the invitation of Lieut. Gen. George H. Brett. On June 4 two U.S. Coast Guard patrol vessels were turned over to the Ecuadoran navy under lend-lease in ceremonies at Guayaquil. United States naval and air forces remained on guard at Salinas and in the Galápagos Islands. At the request of the Quito authorities, the U.S. Government on September 13 agreed to detail an Army officer to serve as Technical Director of the Eloy Alfaro Military College of Ecuador.

In January the Ecuadoran Government announced that the \$1,150,000 credit it received from the Export-Import Bank of Washington on Oct. 28, 1940, would be increased by \$200,000. This additional sum was to be used in completing the Loja-Cuenca link of the Pan American Highway. The health and sanitation program undertaken with United States financial assistance and the cooperation of nearly a dozen United States and Ecuadoran agencies made marked progress. Among the 34 projects under development were a nursing school in Quito, new hospitals, laboratories, and sewage systems in Quito and Guayaquil, and sanitary campaigns at Salinas and in Chimborazo Province.

Substantial progress was reported also on the nationwide program of public works undertaken by the Ecuadoran Development Corporation with the large Export-Import Bank credit made available in 1942. The Corporation had three United States and three Ecuadoran directors. A United States technical mission aided the Development Corporation in carrying forward the broad program for the rehabilitation of El Oro Province, initiated in 1942 (for results, see John M. Clark, "Revival in El Oro," *Foreign Commerce Weekly*, Aug. 21, 1943). After a month's visit to Washington, the Minister of Public Welfare returned to Quito late in April with promises that the United States materials and equipment badly needed by Ecuadoran governmental agencies and the Guayaquil and Quito Railway would soon be delivered. In mid-1943 the U.S. Treasury extended for one year the \$5,000,000 currency-stabilization agreement reached with Ecuador on Feb. 27, 1942.

Other Events. The Ecuadoran Foreign Office in February protested to Peru against an alleged violation of the newly established frontier by a patrol of 100 Peruvian soldiers. The protest was understood to have been due to a misunderstanding. By a decree of June 22, the President authorized the Minister of Finance to seize, administer, or transfer the businesses and properties of persons on the Allied blacklists and of nationals of countries at war with any American nation. On December 25 all Axis nationals still residing in Ecuador were ordered to leave the country as soon as possible and several German and Italian nationals were held incommunicado.

See SPANISH-AMERICAN LITERATURE; WORLD WAR.

EDUCATION. Registration in high schools decreased in the autumn of 1943 by 5.7 per cent as compared with enrollments for the year 1942-43. This falling off of 351,000 pupils was undoubtedly due to the fact that opportunities for profitable employment were open to adolescents in much greater numbers than they had been for many years.

Just before schools opened in September the War Manpower Commission issued the following statement.

During the summer several million high school boys and girls have worked on farms, in factories, in stores, and offices. They have gained valuable work experience. They have helped to supplement family incomes. But most of all, they have felt that they were helping to serve their country.

Their experience has given them a keener sense of what life means. That sense they should not lose. But, at the same time, they must not lose sight of the fact that they have a mission in the future and that current work is not the whole answer either for themselves or for the nation.

Students should realize that beyond the fighting and winning of this war, we must see that it stays won. That will be their obligation. That is the object of their education. In their hands is the ultimate fulfillment of the American ideals.

Communities and educators, on the other hand, must face the fact that there are real manpower shortages in many communities. They should recognize, too, that a community and educational program which does not provide opportunity for work will leave a real hiatus in the lives of many young people who keenly feel the issues of the present conflict. Intelligent action on the part of educators and community authorities can meet that dilemma successfully.

With the approach of a new school term, a plan of action should be developed which, at the same time, continues educational opportunities and permits student manpower to be used in the nation's interest.

The program in every community should be one which takes full account of the laws which govern the labor of children and the boys and girls of school age. There should be no lowering of the barriers which have been so wisely erected against the exploitation of children and youth.

In communities where many such youth are temporarily in the labor force, arrangements can usually be worked out by which they may continue their employment on a part-time basis after they have returned to school this fall. School officials, employers, labor, civic leaders, and parents should plan together now to organize such work-school programs.

The Educational Policies Commission of the National Education Association issued a statement which must be described as nothing more than a qualified agreement with the position taken by the War Manpower Commission. A number of paragraphs may be quoted.

By the hundreds of thousands, boys and girls who in other times would have completed high schools, are now leaving school before graduation to go to work. In some communities, the exodus from high school has already reached proportions which are alarming to all concerned for the success of the war effort and for the long-time welfare of youth. In practically all communities, withdrawals have reached the point where they require immediate attention and action. And almost everywhere, the rates of withdrawal are steadily mounting.

At the same time, there are large sources of labor, especially of adults employed in the production of luxuries and in other non-essential occupations. . . .

The greatest service which boys and girls of sixteen and seventeen can render to the war effort is to get ready for the national service which most of them will be called upon to give at eighteen, in the armed forces, in war production, in civilian war agencies, or in specialized training. Time after time, high officials of the Army and the Navy, of government and industry, have urged youth to use the years up to eighteen to build the foundations of a broad education. That way, they have affirmed, lies the greatest national service.

The greatest service which boys and girls of sixteen and seventeen can render to themselves is to secure now the education which will surely be needed in the highly competitive labor market of the postwar years.

Many cases have already been reported of successful arrangements for combining part-time work in war occupations with the continuation of regular schooling until high school graduation. Such cooperative plans offer the greatest promise of a constructive solution to the problem. All such arrangements, however, should be guided by the principle that both the national welfare and the welfare of youth require that education have first claim on the time and energies of youth.

While the reduction in enrollments in high schools is sufficiently large to justify its recognition as a major social phenomenon, the fact is not to be overlooked that there are still more than five and a half million pupils in high schools. This is so large a percentage of the total adolescent population of the nation that it is clearly evident that education beyond the elementary-school level is recognized by the American people as essential to preparation for life. It is still true that the percentage of young people receiving secondary education in the United States is far and away greater than the corresponding percentage for any other country in the world.

The decline in registration in colleges is reported as 65 per cent for men and 5 per cent for women. These decreases were, of course, due mainly to the draft and expanding opportunities in industry. The Army and Navy have taken over in whole or in part some 400 colleges for the conduct of military schools and are supervising directly instruction in regular college subjects of 300,000 se-

lected students who are in uniform. (For a list, see the Table of UNIVERSITIES AND COLLEGES, where these institutions are indicated by asterisks or daggers.) These students are under full military discipline and are being paid by the government. They have been assigned to duty as students, many of them in the Specialized Training Program. This program provides courses in four divisions of college education: engineering, medicine, personnel psychology, and foreign languages. By far the largest number of students is in the engineering division. This program will ultimately register 150,000 students who belong to the Army. The quota was not filled rapidly during the early months of the year. The tests which were required of all candidates proved to be too severe for many of the applicants. In the later months, however, the number of candidates increased in number and quality to the point where approximately 10,000 were being accepted each month, enough to fill all replacements. The full quota will soon be reached. One hundred thousand candidates took the tests for admission in late November.

The curriculums prescribed by the Army and the Navy for their students in the various colleges are meeting with widespread approval by college authorities in spite of the fact that they differ markedly from the programs of study which were commonly elected in times of peace. It seems altogether probable that, when the war is over, college programs will continue to emphasize science, mastery of modern foreign languages, and other studies bearing directly on ordinary careers.

There can be no doubt that in the field of high-school education the postwar effects on the curriculum will be pronounced. The Army has organized a branch known as the Civilian Preinduction Training Branch, which is making every possible effort to induce high schools to prepare boys of sixteen and seventeen years of age in subjects which will contribute to their efficiency for military service when they reach eighteen years of age. Emphasis is laid on shop courses, but the Branch has published pamphlets containing suggestions formulated by committees of specialists in such fields as English, mathematics, and science. An examination of the recommendations made in these academic subjects shows that the courses of studies which were common before the war are recognized by high-school teachers as formal and in need of revision in the direction of enlivenment and more direct contribution to preparation of pupils for life.

It is especially noticeable that in the field of mathematics the committee which outlined the recommended courses departed from the conventional abstract courses in algebra and geometry and favored training in thinking quantitatively in all kinds of practical situations.

The Preinduction Branch has not yet developed suggestions for instruction in the social studies. It is evident throughout the Army that a certain timidity prevails with regard to instruction in the social field. It is clearly recognized on the one hand that graduates of high schools and colleges are deficient in social understanding, but, on the other hand, the controversial character of many of the problems which have to be dealt with in this field stands in the way of attack by any agency which is in danger of laying itself open to the charge that it deals with politics.

A heated discussion was carried on throughout 1943 as a result of a series of articles published in *The New York Times* early in the year reporting the results of a test in American history adminis-

tered to seven thousand freshmen in thirty-six colleges. A typical statement from the article published in the *Times* of April 4 is as follows:

An analysis of the results indicates that either the college freshmen, recently out of high school, were poorly prepared on the secondary level, or they had forgotten whatever they had learned about United States history. On many aspects of American growth and development they indicated a serious lack of knowledge or understanding.

Although it is likely that some of the students were not serious in answering the questions, it is evident, even after discounting that possibility, that the students simply do not know American history.

For example, 1,705 of the 7,000 students or 25 per cent, did not know that Abraham Lincoln was President of the United States during the Civil War. Twenty-five students listed George Washington as having been President during that highly important period in American life. Other men listed as having been President during the Civil War included Woodrow Wilson, Ulysses S. Grant, Theodore Roosevelt, William Taft, Herbert Hoover, Andrew Jackson, or Warren G. Harding.

Teachers of history replied to the *Times* articles by charging that the test was inadequate, that it dealt largely with facts that called merely for memory rather than for understanding of historical trends. On the whole, however, the contention of the *Times* that American youth need more complete grounding in American history seems to have been proved. This conclusion is amply supported by the report of a commission of leading historians released late in December. The report states frankly that instruction in American history has been inadequate and incompetent.

Educational leaders are greatly disturbed by the fact that the supply of trained teachers has been seriously depleted. The draft has taken many men teachers, and lucrative employment has lured away both men and women. The statistics on teachers' salaries, showing them to be very low, have been presented with more effect than was possible formerly because of the striking contrast between these salaries and current wages and salaries in other fields. Congress was appealed to for a subvention to increase teachers' salaries in general and to give special help to States which find it impossible to keep schools open because of lack of candidates for teaching positions. Congress was told that the teaching force of the nation, which amounts to about one million, normally shows an annual turnover of 93,000. In 1943 the turnover was 189,000, and some schools, especially in rural areas, had to close because of the impossibility of securing anyone to fill vacancies. State certifying authorities and city school systems which have the right to certificate teachers without reference to State requirements have had to lower their standards. The larger school systems have in a number of cases resorted to the device of conducting special coaching classes in order to overcome the hazards to the school program that result from the employment of immature and unqualified teachers. The outlook for the future is dark because the enrollment in teachers' colleges is low and has been low for the past three years.

High hopes were entertained for a time by advocates of Congressional relief. A bill providing \$300,000,000 to be distributed to the States for bettering teachers' salaries made more progress than subsidy bills for general education have ever been able to make in Congress. The bill even reached the floor of the Senate. At the last moment it was amended by the insertion of a provision requiring that any moneys received by a State from the Federal treasury must be expended in the same ratio for schools for all pupils—Negroes as well as whites. There seems to be ample justification for the belief that this amendment was

passed not by the friends of Negroes but by opponents of the bill. At all events, the amendment turned the representatives of the southern States, which would have been most largely benefited by the passage of the bill, against it, and the final action taken was reference of the bill back to committee. The *Washington Post* in a strong editorial stigmatized the action as political sabotage, as did also numerous educational journals.

Many efforts are being made to secure the adoption of plans for education after the war. By far the most significant and promising of these plans was that presented by President Roosevelt in a special message to Congress. The plan recommended by the President was prepared by a committee which he had appointed to discuss the education of demobilized soldiers. Some paragraphs from the President's message are as follows:

We must replenish our supply of persons qualified to discharge the heavy responsibilities of the postwar world. We have taught our youth how to wage war; we must also teach them how to live useful and happy lives in freedom, justice, and decency.

Specifically, I agree with the recommendations made by the committee in this regard as follows:

1. The Federal Government should make it financially feasible for every man and woman who has served honorably for a minimum period in the armed forces since Sept. 16, 1940, to spend up to one calendar year in a school, college, a technical institution or in actual training in industry, so that he can further his education, learn a trade, or acquire the necessary knowledge and skill for farming, commerce, manufacturing or other pursuits.

2. In addition, the Federal Government should make it financially possible for a limited number of ex-service men and women selected for their special aptitudes, to carry on their general, technical, or professional education for a further period of one, two, or three years.

This assistance from Government should include not only cost of instruction but a certain amount of money for maintenance.

The appropriation indicated in the report of the committee as necessary to carry out the plan is one billion dollars. Up to date Congress has taken no action.

The President's committee was careful to leave to existing State and local institutions the actual administration of any funds appropriated. Nevertheless, the usual objection to Federal participation in any educational activities soon came to the surface in influential quarters. In a statement which would hardly have been necessary if the report of the committee had been carefully read the Board of Regents and others in New York State showed that they are oversensitive and afraid, as educators have repeatedly been in the past, of Federal interference. A report of the New York attitude is as follows:

A warning against permitting the Federal Government to exercise control over the education of returning servicemen and displaced industrial workers at the end of the war was voiced yesterday at a conference of State college and university presidents and the Board of Regents during which a broad program of postwar education in the State was discussed.

Dr. William J. Wallin, vice chancellor of the Board of Regents and chairman of its committee on postwar education, who presided at the closed meeting, explained when the discussion had been ended that Federal funds should be channeled through State agencies. "We don't want another NYA," he said.

"We want our own agencies to take care of educating men in the State instead of having it handled by a separate Federal agency," he added.

Other plans for postwar education were made by the International Education Assembly at a meeting of representatives of the United States and thirty other countries. The Assembly adopted a sixteen-point program, including provision for a permanent international committee to give assistance to all countries. A strong position was taken with regard to Nazi and Fascist educational sys-

tems. The action of the Assembly was reported thus: "It would be imperative that the victorious United Nations, in organizing an international society on democratic principles, eradicate those educational systems."

It was voted that local committees composed of known opponents of nazism, fascism, and Japanese militarism be set up in Axis lands to aid United Nations administrators in eliminating "all teachers and school administrators whose past records have been manifestly anti-democratic, and for the purpose of recruiting trustworthy substitutes."

The responsibility and operations of the United Nations representatives should decrease and those of the local and national administrators should increase "as rapidly as they demonstrate their capacity to assume these burdens."

The Institute of International Exchanges and Scholarships announced its plans to intensify its activities and stated that Greece, Poland, Czechoslovakia, and Norway have already agreed to send students to America; one of these countries has indicated that it is fully prepared to send four hundred.

A new organization incorporated under the name Education for Freedom and composed of a number of prominent leaders published a statement that American education faces a crisis because of the low standards that are accepted in many parts of the country. Emphasis must be laid, the organization asserted, on the mastery of the three R's, American history, grammar, and rhetoric.

Newsweek for October 18 contained an article from which the following paragraphs may be quoted.

In Panama City, Ministers of Education of the 21 American republics unanimously signed a ten-year agreement for the establishment of the world's first academic league of nations. The site was the unpretentious brown-front building of the National Institute—part of the University of Panama, where for the present the new project will be located.

Designed primarily for professional and graduate students, the Inter-American University, so its founders hope, will promote understanding among the Americas by offering courses of study in fields of special interest to this hemisphere. Subjects will include sanitary sciences, American folklore, anthropology, and history, comparative legislation and international law, social and economic sciences, mathematics, chemistry, physics, and biology. The university might help standardize degrees and credits among Latin American institutions and provide a laboratory for experiments in such problems as the teaching of English in Spanish- and Portuguese-speaking countries, and vice versa.

Financial support for the Inter-American University will come from the 21 republics; funds will be donated by each country in proportion to its contribution to the Pan American Union (\$1.80 for each thousand inhabitants), and scholarships will be provided for each nation in proportion to the money contributed. The university, which will be tax exempt in all countries, will be administered by a commission composed of the heads of the American diplomatic missions to Panama, headed by Victor Florencio Goytia, Panama's Minister of Education.

New subjects of instruction and new methods of instruction are being developed. The experience of the Army in using visual aids in many branches of training is so satisfactory and its quick results through oral instruction from phonograph records in foreign languages are so convincing that it is confidently forecast that institutions will in the future follow the example of the Army.

Prime Minister Churchill gave great impetus to the movement to make English a universal language by his endorsement of Basic English, the 850 word English vocabulary, in these terms: "Here you have a very carefully wrought plan for an international language capable of very wide transactions of practical business and of interchange of ideas . . . a medium of intercourse and

understanding to many races and an aid to the building up of our new structure for preserving peace." Mr. Churchill made his remarks on the occasion when Harvard conferred on him an honorary degree. He added to his own commendation that of President Roosevelt.

A unique contribution to the social studies has appeared in a volume prepared under the auspices of a committee of the legislature of New York State on the politically delicate subject of labor and industrial relations. The book is copyrighted in the name of the people of the State. It is designed to serve as a textbook in high schools and as informing reading for adults of all classes of society, especially employers and members of labor groups. It traces in an objective way the development of labor policies and movements throughout the history of the United States.

It has long been apparent that the introduction into public schools of studies of labor relations is inhibited by the possibility of clashes between teachers and boards of education because disagreements are likely to arise on account of fundamental differences in views. The book now approved by a legislative committee may prove to be an example which will be followed by the publication of other authoritative books containing much-to-be-desired frank treatments of subjects which up to the present have been avoided in educational institutions because of their controversial character.

Statistical information is to be found in the articles on SCHOOLS (including pupil survival rates and education per capita) and UNIVERSITIES AND COLLEGES, and in the section on *Education and Religion* under the various countries. For education in specialized fields, see the subject, as *ART* under *Art Education*; *DENTISTRY*, *LAW* under *Legal Education*; *LIBRARY PROGRESS*, *MILITARY PROGRESS*. For training for war industries, see the topics listed under *VOCATIONAL TRAINING*. Federal activities in the field are discussed under *EDUCATION*, *U.S. OFFICE OF*; also, *COORDINATOR OF INTER-AMERICAN AFFAIRS*. For the activities of private organizations, see *CARNEGIE ENDOWMENTS*; *GENERAL EDUCATION BOARD*; *PHILANTHROPY*; the educational groups listed under *SOCIETIES*. For educational psychology, see *PSYCHOLOGY*. See also *GREAT BRITAIN*, *NORWAY*, and *U.S.S.R.* under *History*; *NEGROES*; *STATE LEGISLATION*.

CHARLES H. JUDD.

EDUCATION, U.S. Office of. To the schools in wartime the U.S. Office of Education continued during 1943 to give effective leadership and direction as they sought to make their essential contributions to winning the war and the peace. In spite of teacher shortages, of the decimation of student enrollments in secondary schools and colleges, of financial stringencies, the education and training activities of American schools continued to add to the intelligence, resourcefulness, and adaptability of our fighting men, to the technical competence and skill of our workers and to the morale of our citizens. Through preinduction and postinduction training, through vocational training of war production workers, through war service activities, through the study of war problems and postwar plans, the schools and colleges with the assistance of the U.S. Office of Education, contributed their part to the growing might of America.

Vocational Training for War Workers. Financed by an appropriation of \$90,000,000 to the U.S. Office of Education, the States provided vocational training for more than 2,500,000 workers in war in-

dustries in 1943. Two types of courses were provided for men and women workers: 1. Preemployment courses in unit-skill jobs in war industries; 2. Courses supplementary to employment in war industries. Aviation, machine shop, ship and boat-building, and welding accounted for nearly three-fourths of the enrollments. As the labor market tightened many trainees were paid by employers during their fulltime attendance in a vocational school to develop initial skills for a particular payroll job, the number of women trainees increased to approximately 40 per cent of total, and foremanship training was expanded to keep pace with the needs of management for supervisory training on the job. Agents of the U.S. Office of Education assisted at Army and Navy centers in training instructors and supervisory personnel, helped in the compilation of training manuals and in the organization of postinduction training programs. Advisory committees consisting of management and labor representatives aided State and local boards of education in the administration of the vocational training program for war production workers; helped to recruit trainees through the U.S. Employment Service; and counseled concerning training needs and outcomes.

Rural War Production Training Program. During 1943 a total of 64,958 courses, enrolling 754,913 adult farmers, were provided under a \$15,000,000 appropriation from Congress administered by the U.S. Office of Education to the States. Repair, operation, and construction of farm machinery and equipment; production of milk, poultry, eggs, pork, beef, mutton, wool, soybeans, peanuts, sugar, hemp, fruits, vegetable seed; conservation and processing of foods for farm families were some of the subjects studied by classes meeting in farm shops, implement dealers' shops, vocational agriculture classrooms of rural high schools, community halls, churches, and farm homes.

Engineering, Science and Management War Training. Of the total enrollment during the 1943 fiscal year of 509,000, about 422,000 were in courses planned to meet the shortage of engineers, 13,500 in courses for chemists, 11,750 in courses for physicists, and 122,750 in courses for production supervisors. The volume of college-level training, which had increased during 1942, reached its peak in 1943. Women constituted almost 25 per cent of the total enrollment. Members of minority groups in the nation's population were admitted to ESMWT classes whenever they could meet the academic prerequisites. Negro enrollment in particular rose slowly to about 1½ per cent of total in 1943. Although the percentage is small, the total number of Negroes enrolled has been substantial, reaching a cumulative total of more than 14,000 by June, 1943. Two factors seem to account for the small proportion of Negro enrollees. First, a relatively small proportion of the total number of Negroes are qualified and available for technical instruction of college grade; and, second, employment of Negroes in professional, technical, and subprofessional positions has presented complications which may have deterred their undertaking training. Not only did industry have a part in selecting courses and course content, but many men of expert technical knowledge, who were employed in industry, were engaged to teach ESMWT courses under the educational supervision of college faculty members. This program, operated as a section of the Division of Higher Education, was supported by an appropriation of \$25,000,000.

High School Victory Corps. During 1943 the High

School Victory Corps program continued to channel to the schools of the nation recommendations of the Army, Navy, and other Governmental agencies and of major educational associations concerning adaptations in wartime secondary education. Publications were prepared to assist high schools to meet important wartime aims, such as guidance into critical services and occupations, wartime citizenship training, physical conditioning, and other preinduction training. Reports indicate that a large percentage of the nation's high schools adopted or adapted the recommendations of the High School Victory Corps program; that thousands of high schools organized student Victory Corps as a form of recognition for participation in service activities connected with the war, such as war bond drives, hospital aides, salvage campaigns, rationing registrations, and Victory gardens. The High School Victory Corps program suggestions, voluntarily accepted, constituted an effective chain of cooperation assuring the nation of the intelligent assistance of 330,000 teachers and 6,500,000 high-school students in all phases of the war effort.

Visual Aids for War Training. During the fiscal year 1943 the U.S. Office of Education through its Division of Visual Aids for War Training, continued the development of visual aids specifically designed to assist instructors in expediting the training of war workers. One hundred-fifty visual aids units, each consisting of a sound motion picture, a silent film strip, and an accompanying instructor's manual were planned and put in production. Thirty of the units dealt with the shipbuilding skills, 25 with aircraft work, 49 with machine shop work, 20 with supervisory training, 10 with engineering, and 5 with maintenance of farm machinery. Distribution of completed films was handled through a commercial organization under contract awarded on a competitive bid basis. Twenty-eight thousand prints were sold to schools, industries, and the armed forces, both at home and abroad. Under appropriation for the fiscal year 1944, the Division is planning production of approximately 300 additional visual aids units, which when completed will make available to the schools a basic and integrated series of visual materials for vocational and engineering courses.

Special War Services. During 1943 the U.S. Office of Education cooperated with other Governmental agencies in a variety of special war services, including the development of recommendations having to do with the evacuation of civilians in case of air bombardment; the provision of extended school services to children of working mothers in war-congested areas; the certification of need for school facilities in war areas under the Lanham Act; the maintenance of essential school transportation in wartime; educational programs in war relocation centers; safeguards against exploitation of juvenile workers; school participation in war service activities such as salvage programs, rationing registrations, sale of war bonds and stamps. During the year three leaflets concerned with postwar educational planning were issued. Through specific programs emphasis was given to understanding the Far East and the South American Republics. Inter-cultural education, Negro education, rural education, and the education of exceptional children were reported in studies developed by specialists in these fields.

Statistics. The basic statistical data concerning education in the United States continued to be collected and compiled by the U.S. Office of Education during 1943, together with special studies undertaken to meet requests for data from other

Government agencies and the general public. Data included studies of the effect of the war on school enrollments, on school building needs, on land-grant colleges, on Negro education, on college income and expenditures, and on expenditures per pupil in city-school systems. See **SCHOOLS**; **UNIVERSITIES**.

Information Exchange on Education in Wartime. The Information Exchange on Education in Wartime, a unit in the Office of Education Library, continued the development and circulation of packets of loan material on 75 different special topics, such as Inter-American friendship, nutrition, the Far East, health, and the role of the schools in wartime. Thousands of packets were loaned to teachers in rural and village schools having inadequate library facilities.

Inter-American Educational Relations. Activities of the Division of Inter-American Educational Relations, established in 1942, continued during the 1943 fiscal year with regular appropriations and other funds received through the Office of the Coordinator of Inter-American Affairs. Some of these activities include the exchange of graduate students under the Buenos Aires convention, promotion of the study of Spanish and Portuguese, an exchange of teachers between the United States and other American Republics, promotion of the organization of Pan-American Clubs in the schools, the development of exhibits and informational loan packets on the other American Republics for use in schools, and Inter-American Demonstration Centers in more than 30 schools and colleges. See also **EDUCATION**.

Adult and Civic Education. The Division of Adult and Civic Education of the Office of Education, which had been active in the development of Key Centers of War Information in 144 of the nation's colleges and universities, was discontinued as of June 30, 1943, for lack of appropriation.

Higher Education. During 1943 the Division of Higher Education assisted colleges and universities in making adjustments to meet wartime demands. Special reports were made of recommended adjustments of the content of the college curriculum to wartime needs. Studies of teacher shortages and other personnel problems in colleges were published and proposals were made to the Congress for civilian training programs in and through the colleges.

Student War Loans. During the fiscal year 1943 the Division of Higher Education administered a \$5,000,000 appropriation for loans to students in certain special and technical fields considered essential to the war effort. The primary purpose of these loans was to facilitate the acceleration of programs of professional preparation of students in essential categories, i.e., engineering, physics, chemistry, medicine (including veterinary), dentistry, and pharmacy. More than 11,000 students in several hundred institutions received loans totaling approximately \$3,000,000. Loans averaged \$265 per student. Because of the rapidly changing wartime conditions which were affecting higher educational institutions at the end of the fiscal year 1943, the Congress felt justified in providing for only a limited continuation of the Student War Loans program during the fiscal year 1944. The unexpended 1943 balance was reappropriated with the provision that loans should be available only to those students who had received loans during the fiscal year 1943.

Vocational Education. The Vocational Education Division of the Office continued in 1943 to administer the provisions of the Smith-Hughes and

George-Deen Acts for the promotion of vocational education in the States in the fields of agriculture, trades and industry, home economics, business, and public service occupations. The attrition of teaching staffs in vocational education continued to present grave problems.

More than 1,000 departments of vocational agriculture in rural high schools were closed for lack of qualified teachers. The 8,000 vocational agriculture teachers who remained in service contributed to the increased production of vital farm commodities through courses in the planning, production, harvesting, processing, distributing, and storing of farm commodities, the maintenance and repair of farm implements and machines, and the training of emergency farm workers. To these teachers through the Agriculture Education Service of the Office of Education, which operated the Rural War Production Training Program, and State boards for vocational education, services were rendered by publications, conferences, and institutes.

The Business Education Service of the Vocational Division of the U.S. Office of Education continued to provide assistance to the States in the promotion and development of a Federally-aided program of distributive education, including programs of training designed to help retail businesses meet problems and conditions with which they are confronted as a result of wartime emergencies. Such programs included wartime emergency replacement training for new store workers, for inexperienced sales persons, for store supervisors and department heads, for owners and managers of distributive businesses. The Business Education Service rendered advisory services to schools in connection with the adjustment of their office-training programs to meet wartime needs, and in the development of preinduction training for Army clerical employment.

Both regional and special agents of the Home Economics Service of the Vocational Division continued in 1943 to assist teacher-training institutions, State supervisors, city supervisors, and teachers in adapting their curriculums to wartime needs. Special emphasis was given to nutrition education, consumer education, home care of the sick, training youth for wartime service, food conservation, and community organization.

The Occupational Information and Guidance Service of the Vocational Division assembled and disseminated pertinent information through State supervisors and local school authorities concerning military and civilian occupations in wartime. It prepared bibliographies and outlines for the use of guidance counselors in the schools; participated in vocational conferences conducted by schools, colleges, and community organizations, and assisted other agencies and individuals engaged in the preparation of occupational information for use in vocational guidance programs in the schools. In cooperation with the War Department and other Governmental agencies, it developed an "Educational Experience Summary Record" which is being widely used to provide young people leaving school with specific evidence of their abilities, interests, scholastic and work experience, to present to prospective employers or classification officers in the armed forces. It worked with the National Selective Service system (q.v.) in the development of a plan for securing reports on personality traits of the young men facing induction, which reports would be helpful to medical officers in the induction centers. It cooperated with private and Governmental organizations in a program for the recruitment of trainees for professional nursing.

The Trade and Industrial Education Service of the Vocational Division, in addition to operating the program of Vocational Training for War Workers, continued to serve States and local communities in the development of trade-preparatory programs for both boys and girls. It carried forward studies in the development of area trade schools, of apprentice training, of new wartime occupations, of supervision and teacher training, and of public service training.

Vocational Rehabilitation. The expansion of war industries, coupled with a shortage of manpower in several States, provided enlarged employment opportunities for the physically handicapped during 1943. The national program of civilian vocational rehabilitation, operating through State boards for vocational education, reported nearly twice the number of rehabilitants in 1943 as in the preceding year. The Services of the Division included the location, interviewing, and counseling of physically handicapped persons; the development of shorter and more intensified training courses; and the selection and placement of disabled persons in war industries. In the summer of 1943, the Vocational Rehabilitation Division was made an Office of Vocational Rehabilitation in the Federal Security Agency with its director responsible to the Administrator. It will continue to work through State boards for vocational education.

The Service for the Blind continued its special activities in connection with the development of vending stands for blind persons in Federal buildings.

Information and Radio Services. U.S. Office of Education mailing lists, totaling more than 200,000 names, were used by war agencies 81 times during the fiscal year 1943. Wartime information distributed to schools, colleges, and libraries and other educational institutions by the Office of Education totaled 1,380,000 pieces, including in this total the biweekly publication, *Education for Victory*, sent free to some 65,000 educational institutions and administrators.

Twenty-four general educational exhibits were prepared and routed to educational institutions and gatherings. A Radio Transcription and Script Exchange circulated hundreds of titles to more than 5,000 schools. In 1943 the Federal Radio Education Committee of the U.S. Office of Education undertook the development of a new monthly radio program-listing service to schools. It continued to send to schools through its Service Bulletin information about existing wartime radio programs and otherwise continued its function of cooperative study by broadcasters and educators of methods by which radio may be used most effectively as an educational medium. For day care and physical fitness programs, see FEDERAL SECURITY AGENCY.

J. W. STUDEBAKER.

EGYPT. A kingdom of northeastern Africa. Capital, Cairo. Ruler in 1943, Farouk I, who succeeded to the throne Apr. 28, 1936.

Area and Population. Excluding the Anglo-Egyptian Sudan (q.v.), Egypt has an area of about 386,000 square miles of which only about 13,600 square miles along the Nile are occupied. The estimated population on Jan. 1, 1940, was 16,680,000. Populations of the chief cities at the 1937 census were: Cairo, 1,307,422; Alexandria, 682,101; Port Said, 126,907; Tanta, 94,421; Mansûra, 68,637; Asyût, 59,925; Damanhûr, 61,791.

Education and Religion. About 88 per cent of the adult inhabitants were illiterate at the 1927 census. There are two types of education, one provided by

the native primary schools (maktabas) which are mainly concerned with the teachings of the Mohammedan religion, and the other modeled on the European system. European-type education is provided by Government schools and by schools maintained by Christian missionary societies and other religious faiths. All schools are under the general supervision of the Minister of Education. The Government devotes about 11 per cent of its budget to education. It maintains primary, secondary, and technical schools; teachers colleges; and colleges of agriculture, veterinary sciences, law, engineering, and medicine. There is a State University at Cairo, with over 7,500 students in 1939-40. Excluding nomads, the religious division of the 1937 census population was: Moslems, 14,552,704; Copts and Greek Orthodox, 1,099,186; Protestants, 78,203; Latins and Uniats, 126,581; Jews, 62,953.

Production. More than 60 per cent of the inhabitants are engaged in agriculture. War conditions forced the Government to curtail cotton production (the main crop) and increase the output of food crops. The 1942 cotton crop was 3,103,847 kantars (1 kantar = 99 lb.), as against 8,204,386 kantars in 1941. Yields of the chief food crops showed increases as follows: Rice, 863,118 metric tons in 1942 (665,758 in 1941); wheat, 1,261,650 metric tons in 1942 (1,123,800 in 1941); barley, 15,562,000 bu. in 1943 (12,710,000 in 1942); chickpeas, 26,791,000 lb. in 1942-43 (15,876,000 in 1941-42); beans, 626,123,000 lb. in 1942-43 (611,427,000 in 1941-42); onions, 238,590,000 lb. in 1942-43 (222,156,000 in 1941-42); flaxseed, 17,485,000 lb. in 1942-43; millet, 47,991,680 bu. in 1942; corn, 62,113,920 bu. in 1942. Citrus fruits, peanuts, sesame, and sugarcane are other crops. Mineral production in 1940 (metric tons): Phosphate rock, 183,464; petroleum, 928,957; manganese ore, 64,912. The catch of sea and lake fisheries in 1940 was 30,558 metric tons; Nile fisheries, 3,904 tons. Some industrial development occurred during World War II with the aid of the Middle East Supply Center.

Foreign Trade. Imports in 1940 totaled £E31,377,815 (£E34,090,923 in 1939); exports, £E27,811,431 (£E34,080,706 in 1939). Chief sources of 1940 imports: United Kingdom, £E8,901,050; United States, £E3,594,673; Chile, £E2,350,088. Exports went mainly to: United Kingdom, £E10,373,504; France, £E4,353,188; India and Burma, £E1,776,431; Japan, £E1,565,073. Raw cotton exports in 1940 were valued at £E18,858,646 (£E24,330,364 in 1939).

Finance. Including the railway budget, receipts and expenditures for the fiscal year beginning May 1, 1943, were estimated to balance at £E65,000,000 (£E53,526,000 in 1942-43). Public debt on May 1, 1941, £93,363,680 sterling (consolidated, £87,231,540; Egyptian tribute loans, £6,132,140). Average exchange rate of the Egyptian pound (£E): \$4.135 in 1941, \$4.138 in 1942.

Transportation. Egypt in 1943 had about 3,550 miles of state-owned railway lines and sidings and 880 miles of privately-owned light farm railways. During 1942 a swing railway bridge was built across the Suez Canal to eliminate the car ferry on the Cairo-Haifa-Beirut railway line. The bridge connected with the new railway line from Kantara to the Suez roads along the east side of the canal. Highways extended 6,838 miles. The Egyptian Government in 1943 agreed to widen and improve the coastal road from Alexandria to Mersa Matruh. British military authorities undertook to improve the road from Mersa Matruh westward across

Libya to Tunisia. Cairo is the hub of British air communications in the Middle East, with lines radiating to South and West Africa, Palestine, Baghdad, and India. A route for ferrying warplanes and supplies to Egypt from the United States via Brazil, West African ports and Khartoum was opened in 1941. Excluding warships and vessels requisitioned for military service, 8,918 steamers of 30,492,332 tons entered Egyptian ports during 1939 (3,896 steamers of 11,014,013 tons in 1940). Alexandria, Port Said, and Port Suez were the leading ports. See SUEZ CANAL.

Government. The Constitution of Apr. 19, 1923, provided for a Parliament of two houses—a Senate with 147 members serving 10-year terms, two-fifths nominated by the crown and three-fifths elected by universal male suffrage, and a Chamber of Deputies with 264 members elected for five years. The Council of Ministers is appointed by the King but is responsible to Parliament. In the elections of Mar. 23, 1942, the Wafd (Nationalist party) won 108 out of 147 seats in the Senate and 216 out of 264 seats in the Chamber. The two strongest opposition parties boycotted the polls. The Wafd leader, Mustapha Nahas Pasha, formed a Wafdist Government on Feb. 5, 1942, which he reorganized May 26. The following July, the Wafd expelled 15 Deputies and 4 Senators, who joined the opposition. For developments in 1943, see below.

HISTORY

Foreign Relations. The success of the British Eighth Army in driving Axis forces out of Egypt and Libya late in 1942 was followed by a marked relaxation of political tension in Egypt in 1943. On June 5 Bedouin tribesmen of Egypt and Libya celebrated the Allied victory in North Africa at a great assemblage attended by British, American, Indian, and Egyptian political and military leaders. The Bedouin chief, Abballah Lamloum Pasha, thanked the Allies for delivering the Arab tribes of North Africa from the Nazi-Fascist yoke. The blackout in Cairo was ended in August. At the opening of the three-day Wafd party congress at Cairo on November 14, Premier Mustapha Nahas Pasha announced the Egyptian Government's decision to adhere to the terms of the Atlantic Declaration or Charter (see 1942 YEAR BOOK, p. 46) and to open negotiations for Egypt's inclusion among the United Nations. "Independent Egypt," said Nahas Pasha, "stands firm with the democracies, the countries that respect the rights of mankind."

The Egyptian Government on March 2 signed an agreement with the United States covering the status of American troops in Egypt. Under the provisions of this agreement, the U.S. Ninth Air Force based in Egypt opened one of the largest military airports in the world near Cairo on October 25. Following talks in Cairo between Nahas Pasha and Ivan M. Maisky, Russian Assistant Commissar for Foreign Affairs, diplomatic relations between Egypt and the U.S.S.R. were established on August 26 for the first time since the Bolshevik revolution. On September 26 Premier Nahas granted the Soviet Government permission to use radio transmitters of the Egyptian State broadcasting system for the dissemination of Soviet news and propaganda. President Roosevelt, Prime Minister Churchill, and Generalissimo Chiang Kai-shek assembled at the Mena House, a luxury hotel five miles outside of Cairo, on November 22–25 for the historic conference that coordinated Allied strategy against Japan (see UNITED NATIONS).

Arab Federation. Nahas Pasha assumed the central role in the negotiations for federation of the

Arab states that followed the British Foreign Minister's renewed endorsement of the idea in March. On March 31 Nahas announced that he planned to discuss the matter with the governments of the Arab countries separately. If they appeared to be in agreement on basic problems of federation, the Egyptian Government would then invite delegates from the various Arab countries to a conference in Egypt to consider the form and method of federation.

In accordance with this program, Nahas held lengthy conversations in Cairo with Premier Nuri es-Said of Iraq early in August, with Premier Tewfik el Hada of Trans-Jordan in September, and with Sheik Youssef Yassin, special envoy of King Ibn Saud of Saudi Arabia, and a delegation from Syria in October and November. The major obstacles to the proposed federation dealt with in these discussions were the British mandate over Palestine, the Zionist campaign for an independent Jewish national state in Palestine; and the delay of the French administration in Syria and Lebanon in fulfilling its pledge of Syrian-Lebanese independence.

A difference of opinion reportedly developed between the Egyptian and Saudi Arabian conferees over the question of Palestine. King Ibn Saud favored an immediate attempt at settlement of the thorny Arab-Jewish problem, while Nahas Pasha was said to have urged postponement of this question until after the war. While the Syrian delegation was in Cairo a crisis developed in the Lebanese Republic in mid-November as a result of the French action in dissolving Parliament and ousting the native nationalist government. This provoked anti-French demonstrations by throngs of Egyptian youths in Cairo. Nahas Pasha in a series of statements condemned the action of the French authorities and demanded the restoration to office of the Lebanese President and Premier. His attitude reflected that of the other Arab lands.

After the settlement of the Lebanese-French controversy by Gen. Georges Catroux, Nahas Pasha on December 28 sent the latter congratulations. On the same date it was revealed that the Syrian Foreign Minister, Jamil Mardam, and other high Arab officials were en route to Iraq and then Saudi Arabia for further conferences on Arab federation prior to the convening of a general Arab congress in Cairo early in 1944. One purpose of Jamil Mardam's scheduled visit to Saudi Arabia was to straighten out the differences that had arisen between King Ibn Saud and Nahas Pasha.

Internal Politics. The year's main development in the field of internal politics was an outgrowth of the 1942 quarrel between Nahas Pasha and his Minister of Finance, Makram Ebeid Pasha, which resulted in the dropping of Makram Pasha from the Cabinet and his expulsion, along with a group of his followers, from the Wafd party (see 1943 YEAR BOOK, p. 212). In a petition addressed to King Fuad, Makram Pasha accused the Premier and members of his Government of using their official positions to enrich themselves, their families, and friends. The petition, referred to as the "black book," was widely circulated by political enemies of the Premier. Some students joined with opposition politicians in attacking the Government. Nahas Pasha met this threat to his political power during a five-day debate in the Chamber of Deputies late in May, refuting the charges one by one. The debate ended May 24 when the overwhelmingly Wafdist Chamber passed a vote of confidence in the Premier by 160 to 0, after opposition members had walked out of the session.

Economic Measures. Large expenditures by Allied troops and Allied governments created an active war boom in Egypt. While many Egyptians experienced unusual prosperity, others suffered from the rapid inflation of prices that accompanied the boom. The Government took various measures designed to curb the rising cost of living. Rents, which had quadrupled in Cairo, were legally restricted to a level not more than 12 per cent above that prevailing Apr. 1, 1941.

Other methods adopted were requisitioning, price-fixing, distribution of staple commodities by the state, creation of cooperative societies, and subsidization of the production of more foodstuffs. Commercial and industrial firms were required to pay their employees a cost-of-living allowance equal to that paid to Government servants. In a drive against hoarders and profiteers, the Government in May and June requisitioned hoarded goods in warehouses and shops in Alexandria and Cairo valued at over £2,000,000.

Partly for the purpose of impounding excess purchasing power, the Government in February floated a £E2,000,000 loan for the financing of the 1942-43 cotton crop. In November it announced plans for the refunding at lower interest rates and nationalization of the Egyptian public debt. A decree of September 15 established maximum percentages of profit for commercial transactions, effective September 25. The Government also continued its cooperation with the Middle East Supply Center (which see) in stabilizing and improving economic conditions.

See ARABIA under *History*; COTTON; WORLD WAR.

EHFA. See ELECTRIC HOME AND FARM AUTHORITY.
EIB. See EXPORT-IMPORT BANK.

EIRE (IRELAND). A sovereign, independent state, affiliated for certain purposes with the British Commonwealth of Nations; comprising the 26 counties of Southern Ireland formerly designated the Irish Free State. The name was officially changed to "Ireland" in English and to "Éire" in Gaelic by the Constitution effective Dec. 29, 1937.

Area and Population. The area is 26,601 square miles and the population was 2,989,700 (1,512,170 males and 1,477,530 females) at the census of November, 1941, as compared with 2,965,854 at the 1936 census. Populations of the chief cities in 1941: Dublin, 489,276; Cork, 76,758; Limerick, 42,522; Waterford, 28,481. Living births in 1941 numbered 56,710 (56,594 in 1940); deaths, 43,823 (41,885). A total of 31,800 men and 3,272 women emigrated from Éire to Great Britain during 1941 and 31,775 men and about 11,000 women during the first nine months of 1942.

Defense. See 1943 YEAR BOOK and *History* below.

Education and Religion. School attendance is compulsory and there is practically no illiteracy. Gaelic is gradually supplanting English as the language of instruction. There are about 5,114 public elementary schools, with an average attendance of 464,108; 352 recognized private secondary schools, with 38,713 pupils; and two universities—the University of Dublin (Trinity College), and the National University of Ireland with constituent colleges in Dublin, Galway, and Cork—with a total of 5,431 students in 1941-42. Estimated state expenditures on education in 1942-43 (excluding administration): Primary, £3,808,837; secondary, £492,990; technical, £336,085; science and art, £47,173. According to the 1936 religious census, there were 2,773,920 Roman Catholics, 145,030

Protestant Episcopalians, 28,067 Presbyterians, 9,649 Methodists, 3,749 Jews, 715 Baptists, and 7,290 others.

Production. Agriculture, stock raising, manufacturing, and fishing are the chief occupations. Yields of the chief crops in 1942, with 1941 totals in parentheses, were (in long tons): Wheat, 511,518 (435,414); oats, 768,045 (684,426); barley, 172,274 (142,924); potatoes, 3,120,307 (3,689,548); turnips, 2,100,156 (2,631,548); mangels, 1,386,240 (1,760,217); sugar beets, 399,146 (719,533); cabbage, 188,135 (205,021). The 1942 wheat crop was the largest since 1846. Flax production, 5,584,000 lb. in 1942 (6,041,000 in 1941). The 1941 hay crop was 4,224,319 tons. Livestock in 1942 included 4,100,000 cattle, 2,700,000 sheep, 518,700 swine, and, in 1940, 458,580 horses. Sea fisheries in 1941 employed 8,865 persons; the total value of the catch, excluding salmon, was £548,503. The chief manufactured products are flour and flour products, sugar, sugar confectionery, jams, tobacco products, and alcoholic beverages. The Shannon hydroelectric power station in 1941-42 generated 240,336,000 kilowatt-hours, slightly more than half of the country's power needs.

Foreign Trade. General imports in 1942 amounted to £34,692,000 (£29,532,000 in 1941); exports, £32,616,000 (£31,836,000 in 1941). Great Britain was the chief market and source of supply.

Finance. For the fiscal year ended Mar. 31, 1943, Government receipts totaled £39,728,000 (£36,680,000 in 1941-42); expenditures, £43,046,000 (£40,625,000 in 1941-42). The balance in the Exchequer was £1,130,000 on Mar. 31, 1943, and £2,394,000 on Apr. 1, 1942. Revenue for 1943-44 was estimated at £41,582,000; expenditure, £45,137,000. Public debt, £34,628,000 on Mar. 31, 1941. The Irish pound, which is convertible into the pound sterling, exchanged at an average of \$4.032 in 1941 and 1942 on the free market.

Transportation. Éire in 1942 had about 2,493 miles of first-line railway track, 5,358 miles of roads used by motor vehicles, 650 miles of inland waterways, and air connections with Great Britain and (in summer) with Canada and the United States. During 1939 a total of 11,903 vessels of 8,272,568 registered tons entered the ports.

Government. Under the Constitution proclaimed Dec. 29, 1937, there is a President elected by popular vote for seven years. The Oireachtas (Parliament) includes two houses: the Dail Eireann or House of Representatives of 138 members elected by popular suffrage for five years, and the Senate of 60 members (43 elected on a vocational basis, 6 elected directly to represent the two universities, and 11 nominated by the Prime Minister). Executive power is exercised by the Government, or Cabinet, which is responsible to the Dail. For further particulars, see 1937 YEAR BOOK. President in 1943, Dr. Douglas Hyde (assumed office June 25, 1938). Prime Minister, Eamon de Valera, leader of the Fianna Fáil party, who was elected by the Dail Eireann on June 30, 1938. For 1943 developments, see below.

HISTORY

The General Election. The Dail Eireann elected in 1938 adjourned on May 26, 1943, but by special provision remained nominally in existence until a new Dail was elected on June 22. During the electoral campaign, Prime Minister Eamon de Valera's Fianna Fáil (Republican) Government was attacked for its failure to curb soaring living costs, its alleged mismanagement of agriculture, and its inability to end the unemployment which had

driven many persons to emigrate to Great Britain and Northern Ireland. The opposition United Ireland (Fine Gael) party, led by former Prime Minister William T. Cosgrave, demanded the formation of an all-party coalition government to deal with Eire's difficult war and postwar problems. De Valera strongly opposed such a coalition. All of the rival political groups were in accord on the Government's policies of strict neutrality, effective independence from Britain, and the union of Eire and Northern Ireland.

The results of the election showed growing dissatisfaction with the economic policies and programs of both major parties. De Valera's Fianna Fáil lost its majority in the Dail, largely due to the unexpected gains of the Labor party led by William Norton, while a new Farmers party headed by Michael Donnellan cut deeply into the strength of Cosgrave's United Ireland party. The standings of the parties in the new Dail, with their standings after the 1938 elections in parentheses, were: Fianna Fáil, 67 (77); United Ireland party, 32 (45); Labor, 17 (10); Farmers, 14 (1); Independents, 8 (6).

It was noted that while all of Prime Minister de Valera's Cabinet Ministers were reelected by substantial majorities, a number of Cosgrave's leading associates were defeated. Among those elected was James Dillon, who ran as an Independent candidate from a border district after having been forced to resign from the United Ireland party because of his demand for the scrapping of neutrality in favor of cooperation with the United States and Britain. The Labor party's more important role in Eire's affairs was again emphasized on June 28 when Martin O'Sullivan, Laborite, was unanimously elected Mayor of Dublin. He was the first member of the party to hold that office.

De Valera Retains Office. When the newly elected Dail convened on July 1, the three opposition parties proved unable to form a coalition to unseat the Fianna Fáil Government. De Valera was reelected Prime Minister over Cosgrave by a vote of 67 to 37, with 33 members (14 Farmers, 17 Laborites, and 2 Independents) abstaining. The Farmers party, however, indicated its willingness to keep the de Valera Government in power as long as it followed a policy acceptable to agriculture. The Prime Minister accordingly continued to govern with only a slight reshuffling of his Cabinet and with inconsequential changes in policy. However the loss of the Fianna Fáil working majority and his dependence upon the Farmers plainly galled Prime Minister de Valera. On July 2 he hinted strongly that he would soon dissolve Parliament and seek to regain a parliamentary majority in another general election. But no such move had been made up to the end of the year.

Other Internal Events. Meanwhile de Valera pressed forward with his program of Irish national resurgence. On St. Patrick's Day, which witnessed none of the customary festivities, parades, and rallies, he declared that "restoration of the unity of national territory and restoration of a national language are the greatest of our uncompleted national tasks." On May 9 he attacked the partition of Ireland as a permanent obstacle to Anglo-Irish co-operation and understanding, a theme which had again been reiterated by Joseph Cardinal MacRory, Roman Catholic Primate of Ireland, in a speech on April 4. At Waterford on June 16 de Valera announced plans for establishing a popular organization for the complete restoration of Irish as the national language. He described the English language in Eire as a badge of conquest.

The underground Irish Republican Army remained relatively quiescent during 1943, apparently due to the stringent measures of repression taken by the Government. A severe censorship prevented news of adverse internal developments from being published abroad. But the Government continued to exercise firmly the broad powers for the repression of terrorism conferred upon it by the Emergency Powers Act and Offenses Against the State Act of 1940 (see 1941 YEAR BOOK, p. 366). Three I.R.A. internees at the Curragh Camp went on a 49-day hunger strike in mid-summer without obtaining their release. Addressing the Dail on July 9, Minister of Justice Boland said that a German parachutist who landed in Eire in 1940, apparently with plans for invasion, was harbored by the I.R.A. for 18 months.

In the economic field, the principal developments were the growing shortages of staple commodities of all kinds, accompanied by high unemployment and steadily rising living costs. The number of unemployed agricultural and industrial workers was about 88,000 in January and 50,000 at the height of the farming season in July. The cost of living index (Base: January-June, 1939 = 100) increased from 119 in 1940 to 131 in 1941, 144 in 1942, and 159 in May, 1943. The rationing of electricity was introduced Apr. 1, 1943, and of butter on June 5. This was accompanied by more rigid rationing of tea, gasoline, clothing, etc., and the fixing of clothing prices.

An acute shortage of potatoes developed in Dublin late in April. Other foodstuffs remained scarce. Nevertheless the Government in the autumn announced that the total acreage planted to all crops in 1943 was less than in 1942 and that unfavorable weather conditions had further reduced the harvest. The new government-owned Central Bank opened its doors in Dublin on February 1.

Foreign Relations. The Irish ship *Irish Oak*, with plain neutral markings, was sunk by a submarine in the North Atlantic in daylight during May. Prime Minister de Valera described the sinking as wanton and inexcusable. However the Axis diplomatic and consular representatives remained in Dublin. The Japanese Consulate was raised to the status of a Consulate General the same month.

Attacks upon Eire's neutrality policy continued to appear in both the British and American press (see particularly Henry Steele Commager, "A Challenge to Ireland's Neutrality," *The New York Times Magazine*, Mar. 7, 1943). On July 22, the British Home Secretary, Herbert Morrison, publicly declared that Britain would not forget Eire's neutral policy and that it was bound to have a modifying effect on British opinion with respect to Irish partition. Writing in the *Foreign Policy Bulletin* for July 2, John Elliot in his Washington News Letter summarized the consequences of Eire's neutrality policy as follows: "The cleavage between the two sections of the Irish people has been deepened, a large part of the sympathy that de Valera and his party enjoyed in the United States has been forfeited, and 'partition,' if not made permanent, may have been indefinitely extended."

Apparently these developments made little impression in Eire. The Dublin Corporation on September 6 unanimously petitioned the Government to replace the Queen Victoria statue in front of Parliament House in Dublin with a statue of Lord Edward Fitzgerald, a rebel hero of Napoleonic times. On September 11 the Eire censorship banned the *London Sunday Dispatch*, which had a cir-

culatation of some 70,000 in Eire, because it published two articles attacking Eire's neutrality and the de Valera administration. Speaking in the *Dail* on November 16 de Valera declared that Eire had never forgotten the generosity of the United States, but could not be expected to show her gratitude "in the blood of her people." Regardless of possible attempts to penalize Eire after the war, he said, the country must stand by its neutrality policy to the end. At the end of December the Irish ship *Kerlogue* landed at Queenstown (Cobh) 164 German survivors of a naval and air battle in the Bay of Biscay who had been picked up at sea. See *CHEMISTRY* under *Foreign*.

ELECTIONS. For *State Elections*, see the article which follows. For *National Elections (1944)*, see *UNITED STATES* under *Politics*. For *Elections in Foreign Countries*, see particularly *AUSTRALIA*, *CANADA*, *NEW ZEALAND*, and *SOUTH AFRICA* under *History*. For *Labor Elections*, see *NATIONAL LABOR RELATIONS BOARD*.

ELECTIONS IN THE UNITED STATES. The Statewide elections held during the year 1943 were few in comparison with those held in 1942 and others scheduled for 1944. In 1942, for example, State offices were voted upon in all States but Kentucky, Mississippi, and Virginia. Throughout the nation, however, observers watched the 1943 elections closely for any bearing they might have on the 1944 elections for Federal and State offices. The results gave rise to a spate of predictions and counter-predictions, Republican spokesmen foreseeing G.O.P. victories in 1944 and Democrats discounting these claims by pointing to factors which determine national elections but which were not present in 1943. On the whole, the Republicans derived more comfort from the 1943 State elections than did the Democrats, although the fact that many voters stayed away from the polls could be regarded as a qualifying factor.

Elections to State offices were held in 1943 in Kentucky, Michigan, Mississippi, New Jersey, and New York. In Michigan only county and local officials and the State commissioner of education were elected. New York's election, at first scheduled only for county officials, was expanded to include certain State offices, particularly the lieutenant governorship, left vacant because of deaths and resignations.

Elections for governor were held in Kentucky, Mississippi, and New Jersey, all of which had Democratic governors prior to these elections. The State election in Kentucky (November 2) proved to be the most unexpected "upset." In that State, usually Democratic and almost consistently so since the early 'thirties, the Republican nominee for governor, Simeon S. Willis, was elected by a majority of 8,300 votes over his Democratic opponent, J. Lyter Donaldson. At the same time the Republicans won all other important State offices except that of Secretary of State which went to the Democratic candidate.

The gubernatorial election in New Jersey (November 2) also resulted in the replacement of a Democrat by a Republican. The voters in that State gave the Republican nominee, former governor Walter E. Edge, a handsome majority of more than 125,000 over the Democratic nominee, Mayor Vincent J. Murphy of Newark. Fought chiefly on local issues, the election was widely interpreted as a defeat for Democratic "boss" Mayor Frank Hague of Jersey City.

The election of Democratic candidate Thomas

L. Bailey for governor in Mississippi (November 2) was a foregone conclusion. The real race in that State took place in the August primaries. In the first primary on August 3, former governor Martin S. Conner led all of his opponents for the nomination. In the run-off primary on August 24, however, Thomas L. Bailey, State legislator for twenty years, defeated Conner for the nomination.

After the inauguration of these governors-elect in December, 1943, and January, 1944, Republican governors will be in the majority for the first time since 1931. At that time there will be 26 Republican and 22 Democratic governors.

The lieutenant governorship in New York, left vacant by the death of Republican Thomas W. Wallace who was elected to the office in 1942, was followed at least as closely as were the gubernatorial elections in other States. Many commentators held that the result would indicate popular approval or disapproval of the administration of Governor Dewey and, possibly, the political complexion of the nation's largest State in the 1944 campaigns. In the November 2 election, former State senator Joe R. Hanley, Republican nominee, defeated Lieutenant General William N. Haskell (retired), nominee of the Democratic and American Labor Parties, by a comfortable plurality of about 340,000.

See *UNITED STATES* under *Politics*; also *NEGROES*; *SOCIALISM*. For the membership of Congress subsequent to the 1943 elections, see *HOUSE OF REPRESENTATIVES* and *SENATE, U.S.*

HERBERT WILTSEE.

ELECTRICAL COMMUNICATIONS. See *COMMUNICATIONS*.

ELECTRICAL INDUSTRIES. To say that the present World War is a mechanical war would seem trite even to a school child, in view of the utter profusion of airplanes, amphibious vehicles, tanks and other armored vehicles, radio communications and remote controls, naval and transport vessels. However, startlingly few people realize that, in truth, this is an electrical war; that every piece of equipment just mentioned, and many others, would be dead and useless hulks if it were not for the electrical devices that give them life, from the ignition systems which give life to the tank or airplane engine to the electrical range-finding and fire-control devices which give concentrated striking power to the modern battleships of the air as well as those of the sea.

The electrical industry in 1943 produced 33 per cent more and shipped 50 per cent more than in 1942. The year's production was about 5½ times that of 1925, and substantially above the proportionate average for American industry as a whole. Considering the 1940 production figures as an index of 100, the 1943 production of electric motors and other industrial apparatus was 360, miscellaneous electrical materials 318, insulated wire and cable 148, electric power transmission and distribution equipment 135, electrical refrigeration equipment 12, and electrical appliances only 6. Thus did the war-expansion needs of American industry in general affect the electrical industry. As the year closed, the plant and machinery requirements for full-scale war production had been largely satisfied, raw-materials problems had been solved or at least brought under satisfactory control, and manpower in terms of available and effectively usable man-hours (including women) became the factor that will largely control the war output of American industry in 1944.

With the much-publicized "Big Inch" line in operation, attention shifted to a 20-inch pipeline, developed during the year to carry gasoline and heating oils from Texas 1,700 miles to the east coast. It will be powered by more than 100,000 h.p. in electric motors. At 29 pumping stations, located at approximately 50-mile intervals along the line, 88 1,250-h.p. 3,600-r.p.m. electric motors driving pumps will give the line the capacity to deliver daily to the New York and Philadelphia area some 235,000 barrels of gasoline, or the capacity of 14 trains daily, each made of 75 tank cars. Two of the year's largest electric motors were the two 20,000-h.p. motors developed for the U.S. Army Air Forces new "stratosphere" wind tunnel at Wright Field. These motors will drive fans designed to develop a 600-mile-an-hour current of refrigerated air, which will be used to test high-altitude sub-stratosphere performance of combat and other aircraft.

Portable trailer-mounted X-ray equipment was developed and is in active military medical use on many fronts. These units were designed to use standard X-ray films, and include complete dark-room processing equipment. X-rays also have been further adapted to industrial purposes. This is typified by a new mass-production X-ray machine capable of inspecting 17,000 airplane alloy castings in a 24-hour day. Key to the speed of this unit is a moving conveyor which transports the castings through the X-ray inspection chamber, producing every 30 seconds an exposed film covering groups of six castings. Quick processing of the film provides an inside view of the six castings, revealing any that should be discarded because of internal defects. (See PHYSICS.)

In the metallic field, a high-frequency method of heating enables the heating effects to be localized, a feature especially applicable to surface-hardening, brazing and silver-soldering, and annealing. The surface-hardening of steel products can be accomplished without the destruction of valuable sub-surface toughness that is likely with flame or oven heating. Also distortion and scaling are obviated, so that final machining can be accomplished prior to heat treatment. Further, the process lends itself to application through the medium of completely automatic machines, where items of nominal size are involved. Radio-frequency currents (up to fifteen million cycles) are utilized, the power being supplied by vacuum-tube oscillators ranging up to 200 kw in output capacity. Light-weight high-voltage selenium rectifier equipment was developed for air-borne applications. Also, large industrial types of selenium rectifiers were developed, 12-volt 45,000 ampere equipments having been installed in three steel mills to serve tin-plating lines. The amount and proportion of tin required for electro-plating was reduced, and the continuous plating process appreciably speeded up, by the development of new and improved chemicals. Also, a new and simpler method by which silver may be electro-plated on magnesium to prevent oxidation was developed. The amplidyne system of electrical speed control, perfected a few years ago for power and industrial applications has found innumerable and invaluable wartime applications; for example, in the rapid and precise control of multiple gun direction.

A new airplane compass, known as the Gyro Flux Gate Compass, was developed. This compass is unaffected by motion of the plane within normal operating limits, by bomb load, armor plate, or other metal parts, or by the electric fields set up by the relatively heavy current in the various elec-

trical circuits of large modern bombardment aircraft.

The greatly expanded use of air-conditioning, refrigeration, and heat-transfer equipment to speed war production, facilitate testing, and improve products was one of the significant developments of the year. (See HEATING and REFRIGERATION.) Dry-surface heat-transfer units to dissipate heat from mercury-arc rectifiers were extensively installed at several aluminum plants; similar equipment, applied to the cooling of transformers made possible appreciable savings in critical materials. Two- and three-stage refrigerating units, capable of producing refrigerant temperatures as low as -130°F. , represented an appreciable advance in the technique of applying mechanical refrigeration to low-temperature testing and processing.

The use of strategic light metals—magnesium, magnesium alloys, aluminum, and high-strength light alloys—has been facilitated by the development of both manual and automatic equipment for the electric arc-welding of these metals under a protective shield of helium or argon gas. The welding of these metals requires precise control of concentrated heat coupled with the shielding of the molten metal from the oxidizing effect of oxygen in the air. A new electronic control enables automatic equipment to hold proper arc length even while the arc traverses irregular patterns such as those encountered in the welding of curved-surface parts. Heart of the manual equipment is a special holder for the tungsten or carbon electrode that not only conducts electric current to the electrode, but surrounds the electrode with a stream of helium or argon gas. Typical of the developments arising out of demands from shipyards and other outdoor installations is a new A-C welder having a current range from 100 to 625 amperes at 40 volts, designed for outdoor use regardless of weather. Special controls prevent the no-load voltage from rising above 35, but provide full power for welding the instant the arc is struck. Experience and research have revealed that in the use of capacitor discharge control for the welding of aluminum and its alloys, better welds can be produced with less energy by precisely timing the application of the supplemental capacitor impulse to the welding electrode. For this purpose, a new D-C precision timer has developed. Fully electronic control for seam welding was developed and applied in many war industries, for example in the welding of the droppable supplemental gasoline tanks that have enabled Lightning P-38 fighters to accompany heavy bombers several hundred miles deeper into enemy territory. The refinement of automatic and precisely controlled electric welding processes in this connection also permits the substitution of thin steel sheets in place of the war-scarce aluminum formerly used.

Typical of the expedited production of electric propulsion equipment for marine application is the fact that by the end of 1943 some two million horsepower in specially designed turbine-electric propelling equipment had been produced for the new destroyer escort vessels. (See NAVAL PROGRESS.) Novel in design, the main turbine-generating units, including condenser and foundation, are integrally designed to facilitate shipboard installations as consolidated units. The condenser forms the foundation for the complete unit. The associated main propulsion motors also are designed so that they may be installed directly on prepared foundations as a unit of the ship. Dual generating and propulsion equipment provides maximum speed for tactical operations, but permits twin-

screw operation from a single generator for economical cruising or in the event of damage to one engine or boiler room. For ocean-going tankers, the horsepower of the average installation of propulsion equipment is approximately double that of the equipment in prewar vessels. During the year, the first high-speed tankers were put into service, with turbines operating at 590 pounds pressure and 850° F. total temperature. The production of Diesel-electric propulsion equipment for mine-sweepers, harbor tugs, submarines, tankers, salvage vessels, net-tenders, and fleet tugs was nearly double the total horsepower produced in 1942. The horsepower of individual installations went up too, 13,000-h.p. installations being under consideration for special-duty ships. Induction-synchronous electric couplings were built to permit two or more Diesel engines to transmit their output to the high-speed element of a single gear-set for the driving of a single propeller shaft. The low-speed element of the gear set is directly connected to the propeller shaft of the vessel, the electric couplings (involving neither bearings nor shaft) are interposed between the coupling flanges of the engine and the high-speed gears. The engines then are connected to the load by simply energizing the electro-magnetic fields of the coupling, and disconnected by deenergizing those fields. Operation in either direction is possible with one or more engines, simply by starting the engines in the desired direction and energizing the corresponding couplings. Among the physically largest marine electric motors built were some rated at 10,000-h.p. Electric propulsion motors built for tankers alone during the year total well over a million horsepower (See SHIPBUILDING.)

Diesel electric developments extended into the railroad field, too. Of special interest were units ranging up to 75 tons developed to meet the exacting requirements of the U.S. Army for operation in foreign theaters of war. It was necessary for these locomotives to conform to special international clearance specifications, and to be provided with special end-plates to permit interchange of either standard automatic couplers or special draw-hooks and buffers of the European type, to permit the universal use of the equipment wherever the gauge permits. See RAILWAYS.

One of the more interesting applications of industrial X-rays is in connection with the inspection of military explosives. In one instance continuous automatic inspection is provided to check the amount of powder in hand-grenade fuses, at the rate of 4,000 per hour. When a fuse with insufficient powder is encountered, the X-ray inspection equipment automatically activates visual and audible alarms, daubs red paint on the faulty fuse, and records the incident on a meter chart. In another installation, million-volt X-ray equipment is used to search out possible cavities in the explosive charge of 155-mm. shells. The million-volt X-ray equipment was used for this application because of its ability to distinguish accurately between relatively slight differences in density of the total mass penetrated; for example, distinguishing between the completely filled and the partially empty explosive space inside the shell after passing through as much as an inch of steel in the shell walls. The X-ray outfit is located at the center of a twelve-foot "merry-go-round" on which the shells are carried. Half of the tip of each shell is within the heavy-walled examining room, for the protection of the operators. A film attached to each shell is given a nine-minute exposure as the shell passes through the examining room. After the shell

emerges, the film is removed and immediately developed to indicate whether the shell should be accepted or rejected. The process is continuous.

Unique among the power-plant equipment produced during the year were two complete 10,000-kilowatt mobile power plants built on specially designed railway cars under the supervision of the U.S. Navy Bureau of Yards and Docks. These mobile power plants are the first of their kind to be built, and were intended by the Navy Department for quick dispatch to any continental Navy yard, repair station, or other location where for emergency or other reasons supplemental power might be needed on short notice. Each of the mobile plants comprises a train of six cars, on which standard power plant equipment, from boilers to the electric generators, was adapted.

Electrical driving, heating, and control devices contributed directly to the ability of the American steel industry to establish in 1943 an all-time record high output of some 93,000,000 ingot tons. The increase in production of electrical steel ingots was especially phenomenal; from a 1941 production of 3,750,000 tons to a 1943 production of 6,000,000 tons. From the military standpoint, one of the most strategically important and significant factors was the steel industry's capacity to turn out the huge and largely unexpected tonnage requirement of steel sheets. As the war approached, many competent observers criticized the American steel industry for developing its sheet-rolling capacity to the extent that it had been developed in 1930-40 decade, regarding such capacity as largely nonessential for war needs. The capacity, however, has proved literally providential in the face of the actual requirements of this modern mechanical war for steel sheets in enormous amounts and great variety, for uses ranging from aircraft to tanks, armored vehicles, and the merchant ships that once again have given the United States the greatest merchant fleet afloat in spite of intervening losses from submarine attack. The use of thin steel sheets, spirally wound and electrically welded to form thin-walled steel tubing, contributed directly to the Allied military success in the hundreds of miles of north African desert campaign where pipelines of this tubing were laid day by day behind the advancing combat zone to carry the fuel and water which constituted the life-blood of the combat elements, and releasing the huge and vulnerable fleets of transport vehicles that otherwise would have been involved. The use of electrically driven and electrically controlled hot-strip mills for the rolling of plate instead of strip has more than doubled the nation's capacity to produce plates. On the other side of the picture, these electrically controlled mills are capable of turning out, under very close tolerances, sheets or strips down to a thickness of a thousandth of an inch and in continuous lengths of two miles or more. Industry's capacity for rolling aluminum increased materially during the year (the nation's aluminum-producing capacity is reported to have been increased tenfold in the last three years). One of the new mills is located in the State of Washington, and comprises two reversing roughing mills followed by a five-stand tandem hot rolling mill, requiring a total of 28,250 h.p. in seven driving motors, having speed ranges from 30/60 r.p.m. on the first stand to 250/550 r.p.m. on the fifth stand. A new "largest" semi-continuous plate mill for rolling steel was being finished in Utah as the year came to a close. This mill will handle plate 132 inches wide and will involve a series of rolls using nine motors totaling 33,500 h.p.

The electrical industry's appliance manufacturing capacity was essentially diverted to war needs.

Plastics were put to many new uses in the electrical industry, in conservation of more critical materials. One of the more notable developments was low pressure molding processes which facilitated the production of high-strength light-weight parts. This system is based around a method of impregnating various types of cloth and paper with plastic resins, the laminations being subjected to heat and pressure. Typical war products are plastic caps for trench-mortar shells, and housings for loop antennae on aircraft. See PLASTICS.

Electrical contributions to the aviation industry were many and significant, the following examples being only typical. Aircraft gun turrets not only are electrically driven, but in the newer and larger aircraft are subject to coordination through interlocking central fire-control systems. Automatic and semi-automatic flight-control devices not only relieve the pilot and navigator of some of the physical burden of long-range flying, but assure a remarkable accuracy in precision flying. Electric drive has been applied to the gyroscopes which are the heart of horizon-indicators, direction indicators, horizon controls, directional controls, and other strategic flying instruments. Electric drive provides a constancy of speed independent of altitude, air density, or temperature, all of which adversely affect the previously air-driven gyroscopes. To overcome difficulties previously encountered in high-altitude operation, new ignition systems have been developed. New radio transmitting equipment, and the largest used on the aircraft to date, provides a continuous frequency range through the use of plug-in tuning units, and provides facility for continuous-wave telegraph, voice, and modulated continuous-wave transmissions at any frequency within the range. To relieve pilots and flying observers of the relatively slow process of making notes by pad and pencil, a new equipment provides for the recording of up to 66 minutes of continuous speech on 11,500 feet of hair-size steel wire contained on a spool about the size of a doughnut. This is one of the first practical applications of the magnetic recording of speech which, at the time of the 1939-40 World's Fair, was merely a novelty by means of which visitors were enabled to "listen back" to a few seconds of their own speech. The system has been developed to a point where a given magnetic recording is good for 100,000 or more reproductions without any deterioration in quality, although the steel wire "record" may readily be "wiped" clean by a simple magnetic process and made ready for new use. Altogether, modern aircraft depend for their successful operation on some 150 electrically operated devices, although not all are involved on any one aircraft. The extent of aircraft systems may be indicated by the statement that the larger bombers may use up to two dozen different electric motors, and certain of the circuits may at times have to carry currents of several hundred amperes. To meet these increasing electrical demands, new and larger aircraft generators have been developed, weighing less than two pounds per kilowatt in output, and ranging up to 30 kilowatts in output capacity.

Characterized by an Army Ordnance spokesman as "one of the greatest advances in the art of fire-control made during this war," was a new electric gun-director which was given an official public showing in New Jersey in November, 1943. This "M-9" director utilizes electric circuits to make its calculations, in place of mechanical movements which emphasize human errors. See PHYSICS.

Adding to the group of calculating boards, network analyzers, and electro-mechanical mathematical calculating machines, a new differential analyzer was developed during the year, utilizing photo-electric polarized light beams in lieu of certain mechanical or electrical connections, thus reducing the time required for the solution of more complicated problems. See articles on minerals and other products and industries; MACHINE BUILDING.

G. ROSS HENNINGER.

ELECTRICAL TRANSPORTATION. See RAILWAYS; RAPID TRANSIT.

ELECTRIC HOME AND FARM AUTHORITY (EHFA). An agency of the U.S. Department of Commerce which has financed the purchase of domestic electric and gas appliances and electrical wiring for homes and farms; now in liquidation under an executive order of Oct. 13, 1942.

ELECTRIC LIGHT AND POWER. Entering their third year of operation under the rigors of war demands for power and war restrictions of fuel, material, and manpower, the electrical utilities industry of the United States was in a stable condition and able to face 1944 with assurance. The rate of increase of war-industry power demands is expected to taper off toward a stable operating level, thus removing one of the uncertainties which plagued the electric power industry during 1943. Also it is estimated that there is an average margin of about 14 per cent of dependable generating capacity above expected peak loads, taking the country as a whole. This is no great margin of safety, and would not accommodate any catastrophies or general emergencies, especially in certain localities. By and large, however, the power situation is regarded as safe and satisfactory in the circumstances.

With an increase of only 6½ per cent in productive capacity, the American electric light and power industry accomplished a 17 per cent increase in power output. The 32 billion-kilowatt increase in power output in 1943 over the 1942 output is of itself as large as the entire United States electrical load was for the year 1943. Industrial power requirements for 1943 exceeded those of 1942 by 22 per cent, commercial and residential each by nearly 7 per cent. Corresponding figures for 1942 were respectively 26 per cent, 11 per cent, and 8 per cent; for 1941, 30 per cent, 10 per cent, and 7 per cent.

Power Production. The 221 billion kilowatt-hour electric power output in the United States for 1943 exceeded the 1942 output by 17 per cent. Corresponding increment for 1942 was 12 per cent, and for 1941 16 per cent. The recent rate of growth of the electric light and power industry can better be visualized when it is understood that 54 years (1882 to 1936) were required for the industry to grow to its first billion-kw-hr year as compared with only seven years (1936-43) to grow to its first two-billion-kw-hr year with a 21 per cent margin toward the third billion kw-hrs of annual output. Fortunately, in view of the fuel shortages that were experienced in several sections of the United States and especially in the northeastern and Atlantic seaboard states, weather and rainfall conditions were such that hydroelectric plants were enabled to carry some 33 per cent of the total load as they also did in 1942. Continued expansion of government interest in the electric-power field is reflected in the fact that 18 per cent of the 1943

total output of electric power and 32 per cent of the year's increment over 1942 came from governmentally owned plants as compared with respective figures of 14 per cent and 30 per cent for 1942. Other statistical data on electric power generation are given in Table 1, where it may be noted that the effect of pressing old and obsolescent equipment into wartime use has increased the "use and loss" figures by about 50 per cent since 1939.

TABLE 1—ELECTRIC POWER PRODUCTION
(Billions of kilowatt-hours)

Year	From fuel	From hydro	From Canada	Gross total	Uses and losses	Available for sale
1943 ^a ...	146.6	74.4	1.5	222.5	36.5	186.0
1942 ^b ...	125.0	64.2	1.4	190.6	31.2	159.4
1941....	116.9	51.3	0.9	169.1	29.0	140.1
1940....	97.2	47.8	0.9	145.9	27.3	118.6
1939....	86.3	44.0	1.2	131.5	25.8	105.8
1938....	49.1	33.3	0.4	82.8	19.1	63.7
1929....	67.2	33.2	1.0	96.9	21.6	75.3

^a Preliminary figures ^b Revised figures

Financial. The all-time record increase of 27.7 billion kw-hrs in saleable electric energy for 1943 did not bring a corresponding record increase in revenue, reflecting the increased proportion of heavy bulk sales to industry. Gross revenue from power sales for 1943 was an estimated \$3,096,000,000, a 7.3 per cent increase over the 1942 revised figure of \$2,885,843,000. Energy sales to residential customers continues to be the largest single item, remaining at about 34 per cent of the total. Significant again is a \$35,000,000 increase in revenue reported from municipal and miscellaneous plants, reflecting a one-year increase of 53 per cent from governmentally-owned sources. A 10 per cent

TABLE 2—ELECTRIC POWER SALES AND REVENUE

	Total number of customers	Energy sales in millions of kilowatt hours	Revenue in thousands of dollars
Urban Residential			
1943	26,817,700	28,775	1,047,000
1942	26,620,456	26,937	990,185
Change	+197,244	+1,838	+56,815
Rural			
1943	1,182,300	2,875	80,000
1942	1,095,512	2,890	75,027
Change	+86,788	-15	+4,973
Commercial & Industrial			
1943	4,395,000	154,350	1,979,600
1942	4,494,387	129,581	1,820,631
Change	-99,472	+24,779	+158,969
Totals			
1943	32,395,000	186,000	3,096,600
1942	32,210,440	159,408	2,885,843
Change	+184,560	+26,592	+210,757

increase in revenue from power sales to street railways reflects the continuing effect of gasoline rationing and heavy war-worker traffic, and for the second year continues the reversal of the long and steady decline noted in these figures prior to 1942.

A statistical summary of data covering electric power sales and related revenue is given in Table 2.

Reports show that utility expenses are rising more rapidly than revenues. Operating revenue increased 7.9 per cent during 1943, but operating

expenses went up 12.1 per cent and taxes increased 12.7 per cent. Taxes took 25.1 cents out of every dollar of gross revenue, a cent more per dollar than was required for the industry's fuel, salaries, and wages combined. Total taxes were estimated at \$710,000,000.

The average residential consumer used an estimated 1,073 kw-hrs of electric energy during 1943 at an average rate of 3.64 cents per kw-hr, compared with 1,012 kw-hr at 3.67 cents in 1942. Thus, the steady upward trend of usage and the downward trend of unit cost continued.

Rivaling the depression years of 1933 and 1934, 1943 saw only an estimated \$9,921,000 of new capital put into electric utilities, only about 10 per cent of the 1941 and 1942 figures. Including refundings, the total volume of financing in 1943 amounted to an estimated \$371,062,000 which was greater than the final figure of \$365,255,000 for 1942. Securities sold to institutional investors dropped from \$99,688,000 in 1942 to \$26,850,000 in 1943, whereas bonds, debentures, etc., disposed of in public offerings rose from \$226,800,000 in 1942 to \$329,300,000 in 1943. The decline in purchases by institutional investors probably reflects the requirement of the Securities and Exchange Commission for competitive bidding on bond issues.

Capital expenditures for new construction in 1943 totaled some 306 million dollars, as compared with 654 million for 1941, 520 million for 1942, and a projected 233 million for 1944. New generating capacity accounted for 55 per cent of the expenditure, the remainder going into the transmission and distribution facility required to get the power where it was needed. New generating capacity is expected to account for only about a third of the 1944 budget, the bulk going into transmission and distribution facility, distribution getting the most.

Generation. Year-end reports indicate that about 1,835,000 kw in fuel-electric plants and 1,089,000 kw in hydroelectric plants was added in 1943, this total of 2,924,000 kw in new electric generating capacity very closely approximated the 2,970,000 kw that was allocated by action of the War Production Board in 1942, and indicates the degree of control effected. By its original action, WPB also had allotted to the utility industry for 1944 a maximum of 500,000 kw in new capacity, but additional allocations have brought this figure up to an expected 1,465,900 kw for 1944, about 60 per cent in hydroelectric plants and 40 per cent in fuel-electric plants. On this basis, the expansion in electric generating capacity for the three-year period ending with 1944 will amount to 94 per cent of the total new capacity added in the decade 1931-40. The increase in electric generating capacity for the first two war years totals slightly more than 13 per cent of the 1941 United States capacity. Of the total United States generating capacity, the ratio of about 28 per cent hydroelectric to 72 per cent fuel-electric continues. Publicly owned (Federal and local governments, power dis-

TABLE 3—ADDITIONS TO ELECTRIC GENERATING SYSTEMS CAPACITY

Year	Fuel plants				Hydroelectric plants				Grand total fuel and hydro	
	No.	Public Kilowatts	No.	Private Kilowatts	No.	Public Kilowatts	No.	Private Kilowatts		
1943.....	7	144,700	42	1,690,480	42	1,835,100	4	1,051,400	49	2,924,080
1942.....	8	181,500	44	1,574,700	52	1,756,200	6	943,600	61	2,783,100
1941.....	22	188,000	63	2,104,100	85	2,292,100	12	767,800	102	3,078,300
1940.....	39	243,000	57	1,210,500	96	1,453,900	8	263,200	113	1,284,830
1939.....	21	119,750	48	794,930	69	914,680	4	86,450	85	1,695,900
1938.....	..	..	..	..	..	52,800	..	..	..	94,700
1929.....	..	..	..	..	..	2,081,300	..	..	..	2,330,500

tricts, cooperatives, etc.) power plants account for some 19.4 per cent of the U.S. total, the Federal government itself owning 8.9 per cent. As in 1942, the bulk of new generating capacity for 1943 went to the Pacific Coast and to the South to serve the war loads that had been concentrated in those areas. Selected statistical data are given in Table 3.

The geographic distribution of electric generating capacity in the United States as of the close of 1943 is given in Table 4.

TABLE 4—DISTRIBUTION OF ELECTRIC GENERATING CAPACITY REPORTED ON ELECTRIC UTILITY POWER PLANTS AT CLOSE OF 1943

Areas	Plants	Thousands of kilowatts
6 New England states	348	3,390
3 Middle Atlantic states	408	10,963
5 East North-Central states	699	10,911
7 West North-Central states	889	3,538
8 South Atlantic states	418	6,199
4 East South-Central states	174	2,957
4 West South-Central states	422	2,516
8 Mountain states	428	2,593
3 Pacific states	312	5,592
Totals	4,098	48,659

For the 12-month period ended Oct. 31, 1943, coal, gas, and oil the calculated equivalent of nearly 94 million tons of coal were consumed in the generation of 140,215,000,000 kw-hrs of electric energy. As the result of many obsolescent plants and equipment being pressed into service in the war emergency, the fuel burned per kw-hr of power generated went to 1.34 pounds of coal or equivalent—the same figure as was reported for 1941, and somewhat higher than the record low of 1.31 for 1942. The industry held its consumption of critical oil to its 1942 figures—which were 25 per cent under the 1941 figures—by increasing its use of gas by 20 per cent and coal by 12 per cent. The use of natural gas for power-plant fuel has doubled in the past seven years, and is six times what it was in 1924. Fuel plants, comprising 72 per cent of the total U.S. generating capacity, carried 67 per cent of the total load, while favorable water conditions enabled hydroelectric plants to carry 33 per cent of the total load on 28 per cent of the total U.S. generating capacity. See MACHINERY INDUSTRY.

Rural Electrification. According to published reports, the Rural Electrification Administration had a total of 810 systems in operation by the end of 1943, serving a total of about 1,080,000 customers. Comparable revised final figures for the close of 1942 are 803 systems and 1,012,284 customers. A total of 387,900 miles of power lines were reported to be in operation at the end of 1943, as compared with 378,015 miles at the end of 1942, and 348,062 miles at the end of 1941. Generating plants were reported to be in operation on 67 of the systems, totaling 72,000 kw in generating capacity, as compared with 60 systems reporting a capacity of 57,500 kw at the end of 1942. REA systems produced about 198,000,000 kw-hrs of electric energy in 1943, and purchased an additional 1,820,000,000 kw-hrs, as compared with a 1942 performance of 131,000,000 kw-hrs generated and 1,805,000,000 kw-hrs purchased for 1942. Electric energy sold to REA consumers increased from 803 kw-hrs in 1941 to 1,137 in 1942 and 1,546 in 1943, at a respective price per kw-hr ranging from 4.84 cents in 1941 to 4.08 in 1942, and 3.32 in 1943. This rapid increase in rate of energy used per customer and corresponding decline in price per kw-hr undoubtedly reflects the addition of large blocks of low-rate industrial load to the REA systems rather than increased usage

by actual rural customers. REA efforts to connect new customers to existing lines are reflected in the figures of 2.59 customers per mile of line in 1941, 2.67 in 1942, and 2.78 in 1943.

By the close of 1943, the total public funds that had been allotted to REA amounted to some \$472,000,000, earmarked to be spent \$418,000,000 for distribution lines, \$43,000,000 for generation and transmission facilities, \$11,000,000 for consumer facilities. These figures include 1943 allotments of approximately \$11,500,000. See AGRICULTURE.

Government. Close control of utility operations under war regulations continued. Early in the year, a more important place in the war production program was accorded to electric utilities through the creation within the War Production Board (q.v.) of the Office of War Utilities, wherein was concentrated the war regulation of all utilities excepting transportation, with WPB vice-chairman J. A. Krug as director. Numerous changes were made during the year in war regulations, to meet current conditions. The food shortage situation won recognition through rescission of bans on the construction of 32 rural cooperative lines and release of materials for these rural extensions. Gradual relief was noted in the limitation placed on the use of material for nondirect war use, as relative surpluses of previously critical materials began to appear. This was particularly true of copper. By the year end, dim-outs, which had plagued both coasts, were canceled. Also legislation passed in Illinois, Michigan, Ohio, and Georgia, switching those states back to their respective standard times from the advanced "war time," reflected public dislike for the more or less over-played effects of the time change.

Although proponents of publicly-owned power developments continued active during the year, less agitation for municipal ownership was noted than in any of the preceding 10 years. Twelve elections were reported, 3 for and 9 against municipal ownership. Senate investigations were initiated on the REA, the Columbia River, the Shipshaw, and the Grand River projects.

The U.S. Supreme Court voted to review the decision of a lower court upholding the "death sentence" of the 1935 utility Act, but was unable to accomplish anything because so many of the justices disqualified themselves. The disintegration of electric-utility holding companies under the act went into its final stages during the year, the United Gas Improvement and the North American systems, two of the largest in the country, voting to dissolve, while other systems accelerated the disposal of their properties. A total of 175 changes in ownership of electric utility properties (complete systems or parts of systems), have been announced to date since the effective date of the so called holding company Act of 1935. During the year 32 divestments of holding company property were reported by the Securities Exchange Commission, of which 9 sales were made to cities or other public ownership agencies, the remainder remaining in private ownership. For the most part, the divestments were accomplished by mergers, although in some instances operating properties became independent of all holding company controls. On the basis of the results so far, the operation of the utility act has not upheld the early belief of many observers that the dismemberment of holding companies would result in a large increase in public ownership of the utility properties.

The Federal Power Commission (q.v.) continued active in the enforcement of devaluation, ordering a total of nearly a half-billion dollars to

be squeezed out of utilities' book values. The investigation of the FPC into the rates charged in Arkansas to an aluminum plant precipitated considerable debate on the matter of states' rights. As the outgrowth of resulting court action, the National Association of Railroad and Utilities Commissioners voted to request Congress to clarify the Federal power act by amendments to prevent FPC encroachment on the rights of states' regulatory authorities. Compare DAMS; ILLUMINATION. G. ROSS HENNINGER.

ELECTROCHEMISTRY. See CHEMISTRY.

ELECTRON MICROANALYZER. See PHYSICS.

ELECTROSHOCK. See PSYCHIATRY.

ELEMENT 85. See CHEMISTRY under *New Materials*.

ELEVATED LINES. See RAPID TRANSIT.

ELLICE ISLANDS. See GILBERT AND ELLICE ISLANDS.

EL SALVADOR. A republic of Central America. Capital, San Salvador.

Area and Population. The smallest and most densely populated of the Central American states, El Salvador has an area of 13,176 square miles and a population estimated at 1,862,980 in 1943. Indians and mestizos constitute the vast bulk of the population, but the small ruling class is largely of Spanish descent. Populations of the chief cities in 1940 were: San Salvador, 107,859; Santa Ana, 88,612; San Miguel, 47,835; Santa Tecla, 34,941; Ahuachapán, 32,962; San Vicente, 30,722. Living births in 1941 numbered 72,376; deaths, 30,490.

Defense. Military service is compulsory in wartime. In December, 1941, part-time training was ordered for all males between 15 and 50 years of age. The active army on Jan. 1, 1941, numbered 3,370 officers and men (including National Guard), with 78 men in the air force. Trained reserves totaled 728. In 1941, a U.S. Army officer replaced a German as director of the Military Academy. Defense estimates for 1943 were 4,043,000 colones. In December, 1941, the U.S. Government agreed to supply El Salvador with armaments valued at \$1,640,000, only \$1,040,000 of which was to be repaid in six yearly installments.

Education and Religion. Illiteracy remains widespread. At the beginning of 1941, there were 1,349 primary schools with 102,042 regular pupils and 27,452 in special courses for illiterates; 2,551 students in secondary schools; 218 students in four normal schools; 422 students in the National University; and 413 in the School of Music. Roman Catholicism is the dominant religion.

Production. The total value of El Salvador's national production was estimated at \$55,362,300 for 1942, or more than double the value for 1932. Agricultural production accounted for 82.5 per cent of the 1942 total (\$45,619,600); industrial for 15.5 per cent (\$8,601,400); mineral, 2 per cent (\$1,141,300). Coffee normally yields from 80 to 90 per cent of the value of total exports, but it constituted only 29 per cent of the value of 1942 production. Estimated yields of the chief 1942-43 crops were: Coffee, 916,600 bags (of 132 lb.); cotton, about 6,882,000 lb.; sugar, 21,000 short tons. Henequen, rice, tobacco, indigo, corn, and beans are other important crops. The republic has a virtual monopoly of Peru balsam, gathered from the forests. Gold production is about \$1,000,000 annually. Manufacturing is restricted largely to sugar refining, cotton milling, and the production of henequen bags, cigarettes, soap, leather goods, etc.

Foreign Trade. Including bullion and specie, general imports in 1942 amounted to 21,432,000

colones (20,827,000 in 1941) and general exports to 44,928,000 colones (28,010,000 in 1941). In 1941 the United States took 79 per cent of El Salvador's exports (61.7 in 1938) and supplied 77.7 per cent of the imports (46.8 in 1938).

Finance. Budget estimates for 1943 placed receipts and expenditures at 23,901,000 colones and 23,896,000 colones respectively (23,723,000 and 23,721,000 respectively for 1942). Public debt on Jan. 1, 1942, 43,640,973 colones (external, 38,381,775; internal, 5,259,198). Service of the external debt remained in default during 1943. The colon is pegged to the U.S. dollar at 1 colon equals \$0.40.

Transportation. El Salvador in 1942 had two railway systems, with 378 miles of line; air services to the principal towns, provided by the Pan American Airways and TACA systems; and over 3,700 miles of highway. The section of the Pan American Highway pioneer road from San Salvador to Managua, Nicaragua, was opened to traffic in April, 1943. It brought San Salvador within 16 hours of Managua and 24 hours of Guatemala City. A total of 802 ships sailed from El Salvador's three principal ports (La Libertad, La Unión, and Acajutla) in 1941. In that year 3,102 passengers entered or departed from the republic by boat and 5,120 by airplane.

Government. The Constitution of Jan. 20, 1939, vests executive power in a President elected for six years and ineligible to succeed himself. Legislative power rests in the unicameral National Assembly of 42 members elected for one year by universal suffrage. President Maximiliano H. Martínez seized power through a military coup Dec. 2, 1931. After serving out his predecessor's term, he was selected for a four-year term beginning Mar. 1, 1935, and on Jan. 21, 1939, his term was extended for six years to Jan. 1, 1945, by a hand-picked Constituent Assembly (see 1939 YEAR BOOK, p. 693). The National Assembly declared a state of war with Japan on December 8 and with Germany and Italy on Dec. 12, 1941.

History. The close economic and political ties that developed between El Salvador and the United States in 1942 (see 1943 YEAR BOOK) were knit still more tightly during the ensuing year. On March 25 Washington agreed to extend the agreement of Mar. 27, 1941, for the detail of a U.S. Army officer to serve as Director of the Military School and of the Military Academy of El Salvador. Work progressed on the Salvadoran section of the Pan American Highway despite a crucial shortage of cement. The new pioneer road from San Salvador to Managua, Nicaragua, was traveled for the first time in April.

The joint United States-Salvadoran agricultural, health, and sanitation program was carried forward. The new agricultural experiment station in the San Andrés valley, a land reclamation and malaria-control project in the Sonsonate region, and a new cooperative project for the increased production of food were major enterprises in this program. Under a contract signed in Washington early in the year, the Institute of Inter-American Affairs undertook to provide funds, equipment, and technical experts to increase Salvadoran food production as a source of supply for armed forces and civilian workers in the Panama Canal Zone. About 6,000 Salvadorans were reported to have migrated to Panama to work on the new set of locks.

Economic conditions remained favorable due to continued heavy coffee shipments to the United States, the activity on public works, and remittances estimated at \$1,000,000 annually received

from Salvadoran workers in the Panama Canal Zone. There was, however, an inflationary rise in prices; in October imported foods were reported 80 per cent higher than in 1938 and drygoods 75 per cent higher. Living costs of the lower middle class were about 38 per cent above normal. The principal business firms, banks, and railway companies granted their employees, represented by the newly organized Union of Commercial Employees, a 25 per cent salary increase. The Government also sought to curb rising prices by new price control measures, particularly the decree of September 2 authorizing the Committee of Economic Coordination to fix maximum prices for many imported and domestic articles.

Coffee exports in 1942 reached the highest value in 17 years, while imports remained fairly stable. As a result the Central Bank doubled its gold and foreign exchange reserves. The Government took advantage of the favorable financial outlook to increase the export tax on coffee for the 1943-44 crop by 200 per cent, effective Nov. 12, 1943. The decree set aside the entire proceeds of the coffee tax for payment of interest and amortization on the external public debt, which had been in complete default since Nov. 27, 1937. The total public debt on Apr. 30, 1943, amounted to 52,162,000 colones, or about \$20,865,000. Late in December an official Salvadoran mission booked passage for Washington to discuss "economic questions of interest to both nations." It was expected that an agreement on terms for the resumption of debt payments would be agreed upon. See WORLD WAR.

EMERGENCY ADVISORY COMMITTEE FOR POLITICAL DEFENSE. See PAN AMERICANISM; PAN AMERICAN UNION.

EMERGENCY BASE HOSPITALS. See CIVILIAN DEFENSE, OFFICE OF.

EMERGENCY FUND OF THE PRESIDENT. See FEDERAL SECURITY AGENCY.

EMERGENCY MANAGEMENT, Office for (OEM). The Office for Emergency Management was established in the Executive Office of the President by administrative order of May 25, 1940, in accordance with section I (6) of Executive Order 8248, of Sept. 8, 1939, which provides that there shall be, "in the event of a national emergency, or threat of a national emergency, such office for emergency management as the President shall determine."

The Office for Emergency Management as such formerly had certain stated functions which were performed under the direction of the Liaison Officer for Emergency Management. This official existed under the terms of the administrative order issued by the President on Jan. 7, 1941, to the effect that "provision may be made in the Office for Emergency Management for liaison facilities. . . ." When the President, by letter of Nov. 3, 1943, accepted the resignation of the Liaison Officer for Emergency Management, he appointed no successor; the effect was to terminate the liaison facilities under the optional provisions of the administrative order of Jan. 7, 1941.

The Office for Emergency Management is primarily a framework within the confines of the Executive Office of the President, within which framework various civilian war agencies have been established. It has served as a major device for organizing the war program. At present the Office for Emergency Management embraces the following war agencies: National War Labor Board, Office of Alien Property Custodian, Office of Civilian Defense, Office of the Coordinator of Inter-Ameri-

can Affairs, Office of Defense Transportation, Office of Scientific Research and Development, Office of War Information, War Manpower Commission, War Production Board, War Relocation Authority, War Shipping Administration, Office of Economic Stabilization, Office of War Mobilization, Committee on Fair Employment Practice, Foreign Economic Administration, and the Division of Central Administrative Services.

EMERGENCY MEDICAL SERVICES (EMS), EMERGENCY WELFARE SERVICE. See CIVILIAN DEFENSE, OFFICE OF.

EMIGRATION. See IMMIGRATION, EMIGRATION, AND NATURALIZATION.

EMPLOYMENT. See LABOR CONDITIONS under *Employment* and the topics there listed; also under *Women Workers* for the Conference on Employment of Women in Wartime.

EMPLOYMENT SERVICE, U.S. See WAR MANPOWER COMMISSION; SOCIAL SECURITY BOARD.

ENDERBURY ISLAND. See under CANTON ISLAND.

ENGINEERING. See AQUEDUCTS; BRIDGES; CONSTRUCTION INDUSTRY; DAMS; FLOOD CONTROL; FOUNDATIONS; MILITARY PROGRESS; PORTS AND HARBORS; RAPID TRANSIT; ROADS; SANITATION; SHIPBUILDING; TUNNELS; WATERWAYS; WATER SUPPLY; also, for training, EDUCATION; EDUCATION, U.S. OFFICE OF.

ENGINEERS, U.S. Corps of. See MILITARY PROGRESS; also, DAMS; FLOOD CONTROL; PORTS AND HARBORS; WATERWAYS.

ENGLAND. See GREAT BRITAIN.

ENGLAND, Church of. The year 1943 was a notable one in the ecclesiastical life of England and in that of the Anglican Communion as a whole. The continued growth of interest in religion among the men and women of H.M. Forces was paralleled by public interest at home; the Government's education policy raised hopes that religious instruction may receive a better place in the national system of education; and planning on a bold, far-reaching scale was in progress both at home and overseas for the development of the life and work of the Church after the war.

During the year the growth of the Armed Forces called for the release of more and more clergy to meet the shortage of chaplains. Outstanding success attended the institution in many units of the "one-man religious brains trust" known as "The Padre's Hour." In conveying a Christmas greeting from the Church Assembly to the Anglican Chaplains, the Archbishop of Canterbury was able to quote striking testimony to the excellence of their work from "many officers holding high rank in all three Services." Success also attended the activities of the specially selected women who have been assisting the chaplains in work among the women members of the Forces. The Right Rev. Leslie Owen, translated to the vacant Suffragan See of Maidstone, will have the chief responsibility in relation to the training of candidates for Ordination now serving with the Forces and in civilian life.

The nationwide response when H.M. the King called his peoples to prayer on September 3 was again most impressive. Empire Youth Sunday, under the patronage of H.M. the King, was observed with enthusiasm throughout the country, as was also "Battle of Britain" Sunday on September 26. "Religion and Life Weeks" were held in many cities and towns, and many more have been

planned for 1944. Interest in the problems of Evangelism, including the presentation of the Gospel in terms of modern thought and the use of modern methods such as religious "brains trusts," broadcast and cinema services, etc., was stimulated by a debate in the Summer Session of the Church Assembly, when a Resolution was passed approving the appointment of a Commission to inquire into this subject. S.P.C.K. agreed to form a "Church of England Films Commission" which will act as a center for collecting and distributing information about religious films.

The Church has been very active in thinking and planning for the postwar world, and no aspect of such planning has been more insistently pressed than the need that religious education should be made available in all schools. The policy and plans of the National Society, the Central Council of the Church for Religious Education, were finally approved by the Church Assembly. The Royal Assent was given in November to the Diocesan Education Committees Measure, which insures that an Education Committee shall be set up in each diocese. Many plans were discussed for postwar reconstruction with a view to the more effective use of available clerical manpower. Such plans should be facilitated by the Reorganization Areas Measure passed by the Church Assembly at the Autumn Session. The better payment of the clergy should be facilitated by a new scheme ("Scheme K") issued by the Ecclesiastical Commissioners.

On December 15 it was reported at a meeting of the Central Board of Finance of the Church of England that the diocesan contributions to the Church Assembly Fund from January 1 to December 14 totaled £80,325. 4s. 9d. as compared with £68,909. 8s. 2d. in the corresponding period of 1942.

The cause of Christian cooperation and understanding was furthered by a joint Statement of Christian Belief issued by the Archbishop of Canterbury and the Moderator of the Free Church Federal Council on January 4, and by a series of speeches and addresses by the Archbishop of Canterbury. The Archbishop of York (Dr. C. F. Garbett) in September visited Russia "to carry from the Church of England to the Orthodox Church an expression of deep sympathy and heartfelt admiration for Church and people. . . ."

In the United States "advance on a worldwide front, with particular emphasis upon China in the overseas field and Negro work at home" was set forth as the strategy of the American Episcopal Church (q.v.). In Canada the Church has had new problems created by the opening of the Alaska Highway, and has been preparing to do its full duty in connection with the plans which are being laid for postwar immigration, largely from the British Isles. In the West Indies the Church has been contending with a dearth of clergy and with economic problems due to the exchange rates and the difficulties of the banana industry. Many readjustments have been needed in India as the result of the war. In Australia the year has seen the development of a great Missionary Movement. The Episcopal Synod of the Church of the Province of South Africa has appealed to Europeans in South Africa to combat their prejudice against the colored races.

Matters dealt with by the Church Assembly in addition to those already mentioned, included the Budget of £145,000 for 1944, and the Report (communicated by the House of Bishops) of a Commission on the Remuneration and Housing

of the Clergy and Other Matters relating to the Legislative and Administrative Machinery of the Church of England. Other events included a statement by the Archbishops of Canterbury and York on the spread of venereal disease; an appeal by the Church of England Waifs and Strays Society for large suitable houses in safe areas to accommodate the children on its waiting list; the development of youth work by the Church of England Youth Council, and the enthusiastic reception by the Orthodox Patriarch of Alexandria of the Archbishop of York on his arrival in Cairo when returning from Russia.

See UNION OF SOVIET SOCIALIST REPUBLICS under *History*.

ENGLISH LITERATURE. See LITERATURE, AMERICAN AND BRITISH.

ENGRAVING AND PRINTING. *Bureau of.* A Bureau of the U.S. Department of the Treasury which designs, engraves, and prints the U.S. currency and other engraved work for governmental use. Director in 1943: Alvin W. Hall.

ENTOMOLOGY. See INSECT PESTS.

ENTOMOLOGY AND PLANT QUARANTINE. *Bureau of.* See INSECT PESTS; AGRICULTURE, U.S. DEPARTMENT OF.

EPIDEMICS. See MEDICINE; also, CUBA, GREECE, INDIA, IRAN, NETHERLANDS, under *History*.

EQUAL PAY FOR WOMEN. See LABOR CONDITIONS under *Women Workers*; NATIONAL WAR LABOR BOARD; STATE LEGISLATION under *Labor*; WOMEN'S BUREAU.

ERITREA. A former Italian colony on the west shore of the Red Sea, incorporated in Italian East Africa by Mussolini's decree of June 1, 1936, but placed under direct British control following the conquest of Italian East Africa by British Empire and allied forces in 1941. Capital, Asmara.

Area and Population. The original Italian colony had an area of 45,754 square miles and a population in 1936 of 650,000. When the colony became a province of Italian East Africa, additional Ethiopian districts were added, making a total area of 89,274 square miles and a population estimated at 1,500,000 as of May, 1939. With the liberation of Ethiopia, Eritrea's original boundaries were restored. The chief cities are Asmara (7,765 feet above sea level) and Massaua (the principal port), with 23,000 and 15,000 inhabitants respectively, according to 1939 estimates. The natives are divided racially into Tigréans, Danakils, etc., and religiously into Mohammedans, Christians (Copts), and pagans.

Production, etc. Stock raising, agriculture, fishing, and some mining are the chief occupations. Many natives lead a pastoral existence. Latest available crop figures are (in metric tons): Wheat, 3,800 in 1937-38; barley, 19,000 in 1937-38; corn, 6,000 in 1938-39; linseed (exports), 3,900 in 1934-35; sesamum, 500 in 1937-38. The Italians developed banana and other irrigated plantations along the coast. The normal production of salt is 200,000 tons annually; of gold, about 78 kilograms in 1936. Imports in 1938 were valued at 52,200,000 old U.S. gold dollars; exports \$4,400,000.

Transportation. A railway extends from Massaua through Asmara, Cheren, and Agordat to a point near the western frontier. A line connecting this railway with the Kassala-Port Sudan railway was under construction in 1942. Motor highways built

by the Italians link Massaua with Asmara, with Addis Ababa and Gondar in Ethiopia, and with Kassala in the Anglo-Egyptian Sudan. From Assab, secondary Red Sea port, another road leads to Dessye, Ethiopia, on the Asmara-Addis Ababa highway.

Government. Eritrea remained throughout 1943 under the direct control of the British Army's East African Command. An experienced British colonial official assisted in its administration.

History. According to a delayed press report made public on Apr. 26, 1943, the large United States military repair base in Eritrea (see 1943 YEAR BOOK, p. 221) was being gradually dismantled and moved forward to areas hundreds of miles nearer to the fighting lines. Certain factories, mechanical shops, and harbor installations were left in Eritrea for continued use. With the completion of work on British and American bases and other projects, the British military authorities were confronted with the problem of what to do with some 30,000 Italians who had been employed on these undertakings. The Italians reportedly opposed repatriation to Italy.

ESCAPE CLAUSE. See NATIONAL WAR LABOR BOARD.

ESCAPISM. See LITERATURE; MAGAZINES; MOTION PICTURES.

ESMWT. Engineering, Science and Management War Training. See EDUCATION, U.S. OFFICE OF.

ESPIONAGE. See BELGIUM, BOHEMIA AND MORAVIA, BRAZIL, DENMARK, SWEDEN, SWITZERLAND, under *History*; FEDERAL BUREAU OF INVESTIGATION.

ESSAYS. See LITERATURE, AMERICAN AND BRITISH.

ESTONIA. A Baltic republic which proclaimed its independence from Soviet Russia Feb. 24, 1918, and was reannexed by the Soviet Union as a constituent republic Aug. 6, 1940. In August-September, 1941, the Russians were driven out by German troops, which remained in occupation of the country. Capital, Tallinn.

Area and Population. Estonia has an area of 18,359 square miles, including internal lakes, and a population estimated on Jan. 1, 1940, at 1,122,000. Estimated populations of the chief cities on Jan. 1, 1939, were: Tallinn, 144,978; Tartu, 60,281; Narva, 23,834; Pärnu, 21,886.

Religion and Education. About five-sixths of the people are Lutherans and the rest chiefly Greek Orthodox and Roman Catholics. Adult illiteracy was slightly less than 4 per cent in 1940.

Production, etc. Before the Soviet occupation and the sovietization of the economic system, agriculture and dairying supported nearly 70 per cent of the population. The leading industrial products were cotton fabrics and yarn, wood pulp, cellulose, paper, timber, and shale oil. On Apr. 1, 1940, there were 56,456 wage earners in manufacturing plants. No trade figures were issued subsequent to the Soviet occupation. At that time Estonia had about 1,328 miles of railways, 13,416 miles of roads, and a merchant marine of 195,745 gross tons. For prewar figures on production, trade, finance, etc., see 1942 YEAR BOOK.

Government. The constitution of Jan. 1, 1938 (see YEAR BOOK for 1940 for basic provisions) was scrapped under Soviet pressure in 1940. Under threat of invasion, the Estonian Government on Sept. 29, 1939, signed a treaty of mutual assistance with the Soviet Union, giving the Russians naval and air bases on the islands of Oesel and Dagoe and at Paldiski (Baltic Port) on the mainland. The preamble of this treaty stated that it was "based on recognition of the independent state of existence

and on nonintervention in the internal affairs of the other party." On June 17, 1940, this pledge was violated when Soviet troops commenced occupation of the entire republic. The government was forced to resign in favor of a pro-Soviet regime, which held elections for a parliament on July 14-15, with only the pro-Soviet slate of candidates permitted on the ballot. The new parliament petitioned the Supreme Soviet in Moscow for incorporation in the Soviet Union and on Aug. 6, 1940, Estonia became a constituent republic of the U.S.S.R. See YEAR BOOK for 1940 for a full description of this process.

Following the German conquest, Estonia was incorporated (August, 1941) as a district in the newly-created Ostland Province, with a German Nazi, Gen. Karl Litzmann, as General Commissar for Estonia. The country was subdivided into several districts, each controlled by a German District Commissar appointed by the General Commissar. A puppet administration (Directorate) of five pro-German Estonians, headed by Dr. E. Mae, was created to assist the German authorities in ruling the country. This administrative set-up was legalized and made permanent by the decree of Mar. 18, 1942, issued by the Reich Minister for Occupied Territories in the East, Alfred Rosenberg. For developments during 1943, see LITHUANIA under *History*.

ETCHING. See ART under *Prints*.

ETHIOPIA. A native empire in East Africa, conquered and annexed by Italy in 1935-36 and reconquered by British Empire, Ethiopian, and allied forces in 1941. The Emperor Haile Selassie, who was driven into exile May 2, 1936, was restored to his throne in Addis Ababa, the capital, on May 5, 1941.

Area and Population. At the time of the Italian conquest, Ethiopia had an area of about 347,500 square miles and a population estimated at 5,500,000 to 14,000,000. Under Italian rule, large Ethiopian districts were transferred to the provinces of Eritrea and Italian Somaliland (see ITALIAN EAST AFRICA in 1942 YEAR BOOK). The original Ethiopian boundaries were restored upon liberation from Italian control in 1941.

The Amharas, long the ruling race in Ethiopia, are Coptic Christians of Hamitic origin. They number less than 3,000,000. The other chief tribes are the Gallas, Somalis, Afar, Arussi, Ogaden, and Danakil, which are mainly Moslem or pagan in religion. The principal languages are Amharic, Arabic, and Tigrenish. Estimated populations of the chief cities: Addis Ababa, 150,000; Harar, 50,000; Dire Dawa, 30,000; Gondar, 6,000; Dessye, 5,000.

Religion and Education. The Coptic Christians before the Italian invasion were subordinate to the Egyptian Coptic Church, which appointed the Abuna (head bishop). This tie was ended Dec. 1, 1937, by the Italian Viceroy, who assumed power to appoint the Coptic bishops for all Ethiopia, but the former relationship with the Egyptian Church was restored in 1942 when the exiled Abuna Qirillos returned to Addis Ababa. There are numerous priests and the Church holds a considerable proportion of the desirable land. Native elementary education is provided by over 75 government and missionary schools. There are two institutes for young Christians and Moslems, respectively, and a teachers' training school in Addis Ababa.

Defense. Under the Anglo-Ethiopian Agreement and Military Convention of Jan. 31, 1942 (see 1943 YEAR BOOK, p. 223), the British Government

advanced funds and supplied a military mission headed by Maj. Gen. S. S. Butler to aid in the creation and training of an Ethiopian army. An American military mission also was in Addis Ababa. The army was equipped mainly with captured Italian arms. It was reported in 1943 to comprise infantry, artillery, engineers, a signal corps, a regiment of armored cars, and ordnance and supply services, totaling about 10,000 men. At the request of the Emperor, a British police mission undertook the organization of an Ethiopian police force.

Production, etc. Stock raising and primitive agriculture are the main occupations. Coffee, cotton, sugar cane, dates, grapes, barley, millet, wheat, and tobacco were the chief prewar crops. Coffee exports in 1938-39 were 15,000 metric tons. Considerable numbers of cattle, sheep, goats, donkeys, mules, and camels are raised. Some gold, platinum, iron, potash, and salt are produced. Hides, skins, grain, wax, and coffee were exported before the war (see 1942 YEAR BOOK, p. 295, for 1938 trade statistics).

Finance. Previous to the Italian conquest, the Government's normal revenues were estimated at from \$5,000,000 to \$7,000,000 annually in U.S. currency, the bulk of which represented payments in kind. Upon restoration of independence, budget plans called for annual expenditures of about £2,000,000 sterling. The British Government in 1942 granted Ethiopia a two-year subvention of £2,500,000. The Maria Theresa silver dollar was supplanted by the lira as the medium of exchange during the period of Italian rule but reappeared as currency after the British military occupation, the exchange rate being fixed at 45 lire to the dollar. Both the Maria Theresa dollar and British East African coinage were made legal tender pending introduction of a new national currency based on sterling.

Transportation. The only railway extends 487 miles from the port of Djibouti in French Somaliland to Addis Ababa. By the Franco-Italian agreement of Jan. 7, 1935, Italy obtained control of 2,500 out of the 34,000 shares in the French-owned railway company. In 1941 British military authorities assumed charge of the railway for the duration of the war. The Italians greatly extended the highways, which aggregated 2,730 miles in 1935. They built a network of motor roads connecting Addis Ababa with the Red Sea ports of Massaua and Assab in Eritrea, with the Indian Ocean port of Mogadiscio in Italian Somaliland, and with the principal population centers in Ethiopia. In 1943, 4,340 miles of Italian-built roads were open to traffic, of which 1,732 miles were macadamized and 1,401 miles asphalted. Airports constructed by the Italians at the chief towns and military posts were taken over by the British in 1941 for the duration of the war. A large part of the internal trade is still carried by pack-horse and caravan. Addis Ababa is connected by telegraph with Massaua in Eritrea, and by telephone with Djibouti and the larger Ethiopian towns. There are telephone systems in some of the towns. Wireless is now the principal means of internal communication.

Government. Ethiopia was an absolute monarchy of the feudal type until July 16, 1931, when Emperor Haile Selassie proclaimed a unified state with two nominated assemblies to advise his Government. The first Parliament, convened in November, 1932, consisted of a Senate of 27 members chosen from hereditary chiefs of the various provinces and a Chamber of Deputies of about 40 members named by the Emperor from minor mili-

tary officers and provincial leaders. There was an Imperial Council, divided into a Supreme Council (the Emperor and two princes), a Council of Imperial Advisers (10 members), and the officers of the Court. The Emperor acted as Prime Minister. After the Emperor resumed his throne on May 5, 1941, he appointed a number of Ministers and secured the services of British experts to reorganize the political administration of the country. For 1943 developments, see below.

The Anglo-Ethiopian agreement of Jan. 31, 1942, recognized Ethiopia as a sovereign and independent state and provided for the resumption of diplomatic relations. However certain areas adjoining French Somaliland and the whole of the Addis Ababa-Djibouti railway and its properties were "reserved" under temporary British military administration. On Oct. 9, 1942, the Ethiopian Government adhered to the United Nations Declaration of Jan. 1, 1942, and on December 1 it declared war on Italy, Germany, and Japan. See *History* for 1943 developments.

History. Little news of developments in Ethiopia penetrated through the censorship during 1943. However the United Press sent out from Addis Ababa on August 3 a statement by Emperor Haile Selassie upon the resignation of Premier Mussolini in Italy. Pointing out that Mussolini "was the first to introduce banditry methods into present-day European politics," he said Il Duce's "crimes have been as heavy as those of Hitler." The Emperor said that inasmuch as Mussolini had not hesitated to use poison gas against defenseless people (in Ethiopia) and to order "the wholesale massacre of an innocent population," he should not be permitted to end his days in safe retirement. However he declared that "Ethiopia is less interested in vengeance for the past than in justice for the future. . . . It is much more important to Ethiopia to be given the opportunity to share in the building and maintaining of international institutions that will prevent the rise of political bullies trampling on the rights of small nations. . . . Mussolini's downfall only clears a path for the forces of justice to emerge. In itself it is not the guarantee that justice has triumphed. . . ."

On October 16 the Emperor cabled the London *News Chronicle* that he would refuse to recognize Italy as a co-belligerent of the United Nations. A few days later correspondents with the British Eighth Army in Italy reported that Prince Emerou (Imeru), a cousin of the Emperor who was captured in Western Ethiopia in December, 1936, had been released with his retinue of 16 followers after seven years' internment in Calabria Province. The British placed a plane at the Prince's disposal to return to Ethiopia.

Toward the end of the summer, Lord Moyne, British Assistant Minister of State in the Middle East, visited Addis Ababa for conferences with the Emperor. The subjects under discussion were not revealed, but it was taken for granted that they were concerned with the extension of the two-year Anglo-Ethiopian agreement of Jan. 31, 1942, which was due to expire at the end of January, 1944.

The Emperor's Vice Minister of Finance, Yilma Deressa, went to the United States to attend the United Nations food conference at Hot Springs, Va., in May-June. He remained to conduct negotiations on lend-lease and other matters with the State Department. On August 9 Deressa and Secretary Hull signed a mutual-aid agreement under which the U.S. Government agreed to continue to provide Ethiopia with lend-lease supplies and services in return for reciprocal aid.

Some light on internal developments in Ethiopia was shed by Deressa in an interview published in *The New York Times* of June 20. He said that the Emperor had instituted many reforms, including the abolition of toll gates and of the medieval system of taxation, and modernization of the legal system. Government had been centralized and a program of public health education organized. The emissary pointed out that many difficult problems remained. The Italians had "deliberately massacred" the small Ethiopian intelligentsia. The native economic and social system was disorganized by the war. Italian punitive expeditions had left many natives homeless and caused serious dislocations of populations. He said Ethiopia hoped to engage American engineers to build roads and there was urgent need for more teachers, books, and stationery. See **WORLD WAR**.

ETHNOGEOGRAPHIC BOARD. See **SMITHSONIAN INSTITUTION**.

EUROPE. A continent with an area of about 2,092,120 square miles and a population estimated at 402,800,000 (excluding the U.S.S.R.) on Jan. 1, 1940. See separate article on each European country; also **NAVAL PROGRESS**, **WORLD WAR**, etc.

EUROPEAN ADVISORY COMMISSION. See **GREAT BRITAIN** under *History*; **UNITED NATIONS**.

EUROPEAN CORN BORER. See **INSECT PESTS AND PLANT QUARANTINES**.

EVACUEES. See **WAR RELOCATION AUTHORITY**; **SOCIAL SECURITY BOARD**. Compare **REFUGEES**.

EVANGELICAL AND REFORMED CHURCH, The. A denomination formed by the merger in Cleveland, Ohio, on June 26, 1934, of the Evangelical Synod of North America and the Reformed Church in the United States. The highest judicatory is the General Synod, which meets biennially. A new Constitution was declared in effect at the meeting of the General Synod, held at Lancaster, Pa., in 1940. In 1942 a new Book of Worship and Hymnal were formally adopted by the General Synod while in session at Cincinnati, Ohio. The officers of the Evangelical and Reformed Church are: President, Rev. Dr. L. W. Goebel, 77 W. Washington St., Chicago, Ill.; First Vice-President, Rev. Dr. George W. Richards; Second Vice-President, Hon. D. J. Snyder; Secretary, Rev. Dr. William E. Lampe, 1505 Race St., Philadelphia, Pa.; Treasurer, Mr. F. A. Keck.

In its combined statistics for the year 1942, the Evangelical and Reformed Church reports a membership of 665,920 in 2,845 congregations. Total expenditures for congregational purposes amounted to \$9,508,482, and total benevolences to \$1,734,321. The Sunday School enrollment is 468,737.

EXCESS PROFITS TAX. See **TAXATION**.

EXECUTIONS. See **BELGIUM** and the other occupied countries of Europe, under *History*.

EXECUTIVE OFFICE OF THE PRESIDENT. An office of the executive branch of the U.S. Government which included in 1943 the following divisions: The White House Office; Bureau of the Budget; National Resources Planning Board; Liaison Office for Personnel Management; Office for Emergency Management; and the Committee for Congested Production Areas, created in 1943. See separate articles. (The NRPB was discontinued in 1943.)

EXPEDITIONARY FORCE MESSAGE SERVICE. See **COMMUNICATIONS** under *Telegraphy*.

EXPENDITURES. See **PUBLIC FINANCE**; countries under *Finance*. For **War Expenditures**, see under **WAR PROGRAM**.

EXPERIMENT STATIONS, Office of. See **AGRICULTURE, U.S. DEPARTMENT OF**.

EXPLORATION. See **SOCIETIES** under *Geographic*.

EXPLOSIONS. See **ACCIDENTS**; **ELECTRICAL INDUSTRIES**; **FIRE PROTECTION**.

EXPLOSIVES. See **BOMBS**; **CHEMICAL INDUSTRY**; **CHEMISTRY** under *Explosives*; **MERCURY**; **MILITARY PROGRESS**; **MINES, BUREAU OF**; **PUBLIC HEALTH SERVICE**.

EXPORT-IMPORT BANK OF WASHINGTON (EIB). A U.S. agency created Feb. 12, 1934, for the purpose of financing and facilitating trade between the United States, its territories, insular possessions, and foreign countries. By an act approved Jan. 31, 1935, and amended from time to time, the Bank will be continued as an agency of the United States until Jan. 22, 1947, or such earlier date as may be fixed by the President. The latest amendment authorized the Bank to use not more than \$500,000,000 outstanding at any one time for loans to assist in the development of the resources, the stabilization of the economies, and the orderly marketing of the products of the countries of the Western Hemisphere. The Bank has a total lending authority of \$700,000,000.

From its creation to the end of 1943, the Bank had authorized \$1,164,948,061 of loans compared with \$1,101,761,946 at the close of 1942. During the year 1943, disbursements amounted to \$55,687,885 and repayments to \$32,250,352. As a result, outstanding loans at the end of 1943 were \$204,937,874 compared with \$181,500,341 at the end of the previous year.

Although the operations of the Bank in behalf of United States foreign trade have been worldwide, circumstances have restricted them since the outbreak of war almost entirely to the Western Hemisphere and particularly to the making of loans to develop resources vital to the war effort. Because of transportation difficulties and other wartime impediments to foreign trade, the Bank continued during 1943 its plan for underwriting letters of credit of approved foreign banks which are opened in this country by United States commercial banks, thus helping to preserve long-established markets and trade channels to the extent possible under wartime conditions.

See **BRAZIL**, **ECUADOR**, and **HAITI** under *History*; **RECONSTRUCTION FINANCE CORPORATION**.

WARREN LEE PIERSON.

EXPORTS. See **TRADE, FOREIGN** and the topics there listed. For **Export Controls** and the **Office of Exports**, see **ECONOMIC WARFARE, OFFICE OF**.

EXPRESS-WAYS. See **ROADS AND STREETS**.

EXTENDERS. See **FOOD AND DRUG ADMINISTRATION**.

EXTORTION. See **FEDERAL BUREAU OF INVESTIGATION**.

EXTRATERRITORIAL RIGHTS. See **CHINA** under *History*.

FACILITIES BUREAU. See **WAR PRODUCTION BOARD**.

FACILITY SECURITY DIVISION and PROGRAM. See **CIVILIAN DEFENSE, OFFICE OF**; **MINES, BUREAU OF**.

FAEROES. A group of 21 islands (the chief being Bordö, Kalsö, Osterö, Sandö, Strömö, Suderö, Vaagö, and Viderö) north of Scotland, forming a county of Denmark, but under British military control since Apr. 10, 1940. Total area, 540 square miles. Population (1935 census), 25,744. Capital, Thorshavn (on Strömö), 3,611 inhabitants. The

chief exports are fish, whale oil, woolen goods, lambskins, and feathers. The islands are administered by a Danish governor and the local parliament (Lagting).

FAIR EMPLOYMENT PRACTICE, Committee on. Originally a Committee established by executive order within the Office of Production Management (see *YEAR BOOK* for 1941) on June 25, 1941, and transferred to the War Manpower Commission on July 30, 1942. This Committee ceased to exist upon the establishment of a new Committee on Fair Employment Practice within the Office for Emergency Management on May 27, 1943.

The purpose of the Committee is to promote the fullest utilization of all available manpower and to eliminate discriminatory employment practices. Executive Order 9346, by which it was established, provided that all agencies of the U.S. government include in all contracts a provision obligating the contractor not to discriminate against any employee or applicant because of race, creed, color, or national origin. Federal agencies concerned with training for war production were required to assure that such programs are administered without discrimination. The Committee is empowered to receive and investigate complaints of discrimination, to conduct hearings, make finding of fact, and take appropriate steps to obtain elimination of such discrimination. Chairman: Malcolm Ross.

FALANGE ESPAÑOLA. See *ARGENTINA* and *SPAIN* under *History*.

FAIK FOUNDATION. See *PHILANTHROPY* under *Foundation Activities*.

FAIKLAND ISLANDS. A British crown colony in the South Atlantic, 480 miles northeast of Cape Horn, South America. Area, 4,618 square miles. Population (1941), 2,433. Capital: Stanley (on East Falkland), had 1,246 inhabitants. The chief occupation of the people is sheep farming. In 1941 there were 623,977 sheep in the colony. Oats and potatoes are grown in small quantities. Trade (1940): imports £146,438; exports £199,381. The main imports included groceries, hardware and machinery, coal, coke, and oil; exports comprised wool (3,903,289 lb., valued at £183,400), seal oil (12,600 barrels, £50,428), sheepskins and hides (£9,700), livestock, and tallow. Shipping entered (1941): 75 vessels aggregating 90,570 tons. The colony is administered by a Governor, assisted by an executive council, and a legislative council. Governor and Commander in Chief, Allan Wolsey Cardinall (appointed Feb. 8, 1941).

Dependencies. These comprise all islands and territories between 20° and 50° W., south of 50° S., and between 50° and 80° W., south of 58° S. The main land divisions are South Georgia (1,450 sq. mi.; pop., 360, including 7 females, in 1940), South Shetlands, South Orkneys, South Sandwich Islands, and Graham Land. The principal industry is whaling. Guano output in 1940 totaled 6,586 metric tons. Sealing operations are carried out. Reindeer have been introduced and are thriving. Trade (1940): imports £124,487; exports £103,620. The administrative authority is vested in the governor and the executive and legislative councils of the Falkland Islands.

History. Military forces from overseas were sent to the islands after Japan entered the war. Stanley became an armed camp and the local Defence Force was merged with the garrison.

FAMILY PLANNING. See *BIRTH CONTROL*.

FAMINES. See *ARABIA*, *CHINA*, *GREECE*, and *INDIA*, under *History*; for serious food shortages, see *RATIONING* and the topics there listed. Compare *RELIEF AND REHABILITATION*; *WAR RELIEF*.

FANNING ISLAND. See *GILBERT AND ELLICE ISLANDS*.

FARM CREDIT ADMINISTRATION (FCA), FARM SECURITY ADMINISTRATION (FSA). See *AGRICULTURE* under *Resources of Small Farms*.

FARMS, FARMING. See *AGRICULTURE* and the topics there referred to.

FASCISM. See *ALGERIA*, *ARGENTINA*, *BRAZIL*, *BULGARIA*, *COSTA RICA*, *FINLAND*, *FRANCE*, *GERMANY*, *GREAT BRITAIN*, *ITALY*, *JAPAN*, *MEXICO*, *MOROCCO*, *POLAND*, *SOUTH AFRICA*, *SPAIN*, *SWITZERLAND*, and *TUNISIA*, under *History*. For trials of Fascists in the United States, see *LAW* under *War Decisions*.

FASHION EVENTS. Government stepped forward as chief fashion designer. Order L85, devised to save material and labor, actually launched a fashion that will long be remembered as admirable. For L85 narrowed the silhouette to a lean, sure line, banished furbelows and excrescences, encouraged simplicity with confidence behind it. The result was that look of elegance always characteristic of the costumes of the best couturiers—a look born of understatement. There were no better dressed women in the land than the WACs, the WAVES, and the SPARS, and other women strived to copy their trim suits, their scrubbed, clean grooming, their casual but truly glorious posture. These facts held true regardless of whether a woman spent \$16.95 for a suit or \$175 for a dress. The only real difference existed in the quality of material used and whether it was ready-made or custom-made.

The leading fashions were: suits and workers' uniforms; the straight chemise dress with natural shoulder and normal waistline; the narrow simple shoe; the plumb-line skirt; blouses, accessories, and jewelry in which fancy was allowed full play. These simple styles helped the pattern industry. More than 75,000,000 home-sewing patterns were bought, a total never before reached. Home-sewing centers were opened in many department stores and were well attended.

Textiles saw wool and rayon take the lead with cotton a desired but surprising best seller through the summer months. Lamé enjoyed a spurt in sales when fall came round. No one color was given preference as the Government warned that such an upswing would cause a shortage. Every color was good so long as it was bright. In fact the sudden surge to bright colors which started this year seems destined to continue. The courage to buy, mix, match, and harmonize colors has resulted in a discovery of color with its excitement, its happy charm, its possibilities, that will continue and affect most of the things women buy for several years to come.

For daytime wear, suits, chemise-dresses, and workers' clothes were the uniforms of all women out of service. Evening saw them in a fashion that was brief and bare—low-cut with short skirt and cap-sleeve. Long evening clothes were seldom worn though the very young still clung to their bouffant skirts. However, for very formal and special occasions fashion borrowed an idea from the most chic, most charming and accomplished diplomat of the many who visited the United States this year—Madame Chiang Kai-shek. Her straight, sheath-line gowns were copied for long skirts in a costume made in both one-piece and two-piece models.

Coty, a leading parfumeur, instituted a fashion award for American designers. The bronze figure known as "Winnie" was sculptured by Malvina Hoffman. Judges of the contest were Edna Woolman Chase, Editor-in-chief of *Vogue*, William Church Osborn, Grover A. Whalen, and 34 fashion editors. Mayor LaGuardia of New York officiated when the award was made. "Winnie" was presented along with a \$1,000 War Bond to Norman Norell of Traina-Norell. Tying for second place were Lilly Daché and John Fredericks, hat designers. Eight citations were made: Adrian of Hollywood for his V-line suit; Hattie Carnegie for her short evening dress; Clare Potter for her ruffled blouse; Charles Cooper for his drawstring drapery; Mainbocher for his lumber-jacket suit; Clare McCordell for her "Popover" dress; Valentina for her trouser-pressed skirt.

Coats resolved themselves into two groups, the Chesterfield and the Tuxedo. The novel innovation was the sudden popularity of fur-lined coats, which appeared in both models. Fur coats enjoyed unprecedented sales with the chief preference being for mink, Persian lamb, opossum, and beaver, with summer ermine entering the fashion picture more importantly than in years.

During the spring, hats tended toward the diminutive Homburg and the calotte, while an effort (not too successful) was made to revive the cloche. These same styles returned in the fall together with small hats with a forward, lifted line, like the antenna of an insect. During the summer, hats touched two extremes—from huge cartwheels to a mere bunch of flowers or feathers—and very often were not worn at all.

The rationing of shoes, the elimination of many colors in gloves, and declining stocks in hand-bags caused the accessory picture to be one of ingenuity rather than of rule. Somehow women managed to keep them bright, interesting, decorative.

But unquestionably the surprise of the fashion world was the demand for precious jewelry. This outreached any figure known before, despite the fact that every sale incurred a ten per cent excise tax. Diamond solitaires from one-half carat to ten carats, watches of gold set with diamonds and precious stones, clips and pins of diamonds, sapphires, and rubies were purchased in department stores and in the exclusive jewelry shops. Design and fine craftsmanship, together with the fact that New York became a diamond center that rivaled London and Amsterdam in their palmiest days, were contributing factors to this vogue for jewels. But above all money was plentiful, costumes were plain, and the American man is generous.

Along with the demand for luxuries the cosmetic business found its sales soaring to new heights. Perfume and sachet enjoyed a banner year. Creams, lotions, face powders, lip-sticks, and rouge gained thousands of new users as incomes mounted in the lower brackets. Liquid stockings were more in demand during the summer months than ever before. Hand creams and lotions were demanded by workers eager to offset the effects of days at the machines. Beauty shops were installed in war production plants as a means of preventing absenteeism.

The fashion magazines were crowded with advertising, with paper rationed as pulp stocks declined. Stores ceased to present specific models in their advertising because they lacked stock to supply such stimulated demand. Many used space hitherto reserved for fashions for institutional advertising. Despite OPA rulings prices soared but customers bought gratefully. More and more substitutes appeared on the shelves. By the end of the

year surplus stocks of both manufacturer and retailer had dwindled to alarming depths and the new year came without the most optimistic or pessimistic prophet willing to discuss future fashion events.

CATHERINE OGLESBY.

FASTAX CAMERA. See **PHOTOGRAPHY**.

FATHERS' DRAFT BILL. See **SELECTIVE SERVICE SYSTEM**; **UNITED STATES**.

FATIGUE. See **PSYCHOLOGY** under *Industrial Psychology*.

FATS AND OILS. See **CHEMISTRY**; **COTTON**, **DAIRYING**; **WAR PRODUCTION BOARD** under *Salvage*.

FBI. See **FEDERAL BUREAU OF INVESTIGATION**.

FBIS. Foreign Broadcast Intelligence Service. See **FEDERAL COMMUNICATIONS COMMISSION**.

FCA. Farm Credit Administration. See **AGRICULTURE**, **U.S. DEPARTMENT OF**.

FCC. See **FEDERAL COMMUNICATIONS COMMISSION**.

FDIC. See **FEDERAL DEPOSIT INSURANCE CORPORATION**.

FEA. See **FOREIGN ECONOMIC ADMINISTRATION**.

FEDERAL AIRWAYS SYSTEM. See **CIVIL AERONAUTICS ADMINISTRATION**.

FEDERAL BUREAU OF INVESTIGATION (FBI). Although having greater responsibilities than ever before in its history, the Federal Bureau of Investigation was successful in the fiscal year 1943 in carrying out its primary responsibility of protecting the home front against spies, saboteurs, and subversive agents. The FBI's counterespionage and counter-sabotage programs were vigorously maintained throughout the fiscal period and the measure of success achieved can be gauged by the thwarting of foreign espionage plans and the complete absence of foreign-directed sabotage.

Among the numerous protective measures utilized during the year were Paneling Boards composed of representatives of the FBI and the Intelligence Services of the Army and Navy at ports of air or sea entry. The thorough questioning of persons entering and leaving the United States proved a most effective barrier for those attempting to engage in activities harmful to the Nation's security.

Highlighting the activities of the year was the culmination of the case involving the eight submarine-landed German sabotage agents, six of whom were executed while the other two received sentences of life and thirty years in prison, respectively.

During the fiscal year 1943 local, city, county, and State law enforcement officers were most cooperative and proved of invaluable service to the FBI in the discharge of its duties. Individual citizens and patriotic and civic groups continued their commendable aid to the FBI during the year. These contributions were clearly recognized by the President of the United States on Jan. 8, 1943, when he reiterated his directive of Sept. 6, 1939, calling upon all citizens to report any information relating to espionage, counterespionage, sabotage, subversive activities, and violations of the neutrality laws to the FBI.

Continuing its Mobilization Plan for law enforcement officers, the FBI conducted 1,604 Conferences during the fiscal year 1943, representing nearly 10,000 different local, city, and county law enforcement agencies. These Conferences were attended by 149,119 law enforcement officers.

The fiscal year 1943 saw the continuance of a very close cooperative relationship between the FBI and other Federal agencies on security mat-

ters. Weekly conferences between the Intelligence Services of the Army and Navy and the FBI for the mutual exchange of data and the over-all coordination of intelligence activities on a nationwide basis were held.

The fiscal year ending June 30, 1943, saw the FBI and cooperating law enforcement agencies continuing a rigorous enforcement of the alien enemy program in accordance with the Presidential Directive. As the year ended a total of 14,432 alien enemies had been apprehended since the outbreak of war on Dec. 7, 1941. Of this number 5,027 were taken into custody during the fiscal year ending June 30, 1943. In carrying out the responsibilities, 24,662 premises and dwellings of alien enemies were searched for contraband materials by the FBI and assisting local law enforcement agencies.

The counterespionage program of the FBI has brought enemy espionage within the United States under control. During the fiscal year 1943 there were 28 convictions for espionage or for failure to register as foreign agents and sentences totaling 255 years were imposed. Other cases were under investigation and several prosecutions were pending as the year ended.

Although there was a substantial increase in the number of cases of suspected sabotage during the fiscal year 1943, there was no evidence of any foreign-directed sabotage. During this year 90 convictions resulted from prosecutions in Federal courts in sabotage cases investigated by the FBI. Sentences imposed totaled 287 years and 6 months, 1 life and 6 deaths, with fines of \$31,004.

Meticulous attention was given to the investigation of sedition cases by the FBI during the fiscal year 1943; 29 convictions with sentences aggregating 146 years and 1 day were imposed under these statutes. As the year ended, a total of 1,094 cases had been investigated, and 42 individuals and 1 corporation were under indictment and awaiting trial.

Adhering to its policy of avoiding mass arrests and "slacker raids," the FBI continued its investigations of violations of the Selective Training and Service Act. Convictions for the fiscal year 1943 totaled 3,071 while sentences aggregated 7,542 years, 2 months, 29 days, and fines amounting to \$478,001 were imposed. Since the registration date on Oct. 16, 1940, the FBI has closed a total of 204,519 cases involving matters pertaining to violations of the Selective Training and Service Act. As a result of its investigative activities, 7,054 men were inducted, 88,444 registrants were located and complied with the Act, and 5,455 men registered.

With the accent on war production, an increase in the number of cases involving war frauds of various types took place during the fiscal year 1943. Among the cases handled by the FBI were violations of the Servicemen's Dependents Allowance Act of 1942, the Kickback Racket Act, and numerous schemes to defraud the government, such as the use of inferior materials, collusive bidding, careless or wilful evasion of proper inspection procedures, and illegal and excessive commissions. Continuous attention was afforded investigations of this nature by the FBI, and during the year 66 convictions, with sentences of 93 years, 8 months, 2 days, and fines, savings, and recoveries of \$164,484, were recorded.

The wartime responsibilities of the FBI also included inquiries concerning the loyalty of designated aliens employed on war contracts, violations of the Export Control Act regulating the exportation of critical and strategic materials from the

United States, violations of the Presidential Proclamation of July 17, 1941, pertaining to dealing with individuals and organizations commonly referred to as being on the "Proclaimed List of Certain Blocked Nationals." Attention was also given to matters pertaining to alien registration, Visa Control, Exit and Reentry Control, and to checking the names of American seamen applying for passports to sail in foreign commerce.

Regular Criminal Investigative Activities. The FBI continued to meet the responsibilities imposed upon it by regular criminal statutes. From the passage of the Federal Extortion Act on July 8, 1932, to June 30, 1943, 890 convictions in Federal courts resulted from investigations by the FBI. Sentences totaling 3,775 years, 5 months, and 5 days were imposed.

In the fiscal year 1943 there were 71 convictions from prosecutions in Federal courts, with sentences totaling 218 years, 10 months, and 10 days, and fines amounting to \$2,430 were recorded.

During the fiscal year 1943, 92 convictions in Federal courts for bank robbery, larceny, and burglary were recorded, and sentences totaling 725 years, 2 months, and 10 days were imposed. Sixty-one fugitive bank robbers were located and recoveries amounting to \$30,617 were effected.

Twenty-nine kidnaping cases occurred and all were solved during the fiscal year 1943. Forty-seven convictions resulting from the investigative work of the FBI were effected and sentences totaling 461 years, 10 months, and 3 days were recorded. Since the passage of the Federal Kidnaping Act on June 22, 1932, 254 cases of kidnaping and conspiracy to kidnap have been investigated by the FBI, and only two of these cases remain unsolved. There were no cases of kidnaping during the fiscal year 1943 involving payment of ransom.

Irregularities in national banks, member banks of the Federal Reserve System, and banks insured by the Federal Deposit Insurance Corporation exceeding \$3,700,000 were reported to the FBI for investigation during the fiscal year 1943; 222 convictions resulted from the prosecutions in Federal courts. Sentences imposed totaled 781 years, 8 months, and 2 days, while fines and recoveries amounted to \$334,514.

Since the passage of the National Motor Vehicle Theft Act making it a Federal offense to transport a stolen vehicle in interstate commerce, 72,106 motor vehicles valued at \$40,814,782 were recovered in cases investigated by the FBI. In the fiscal year 1943 a total of 2,171 convictions resulted from prosecutions under this act in Federal courts. Sentences aggregating 6,410 years, 3 months, and 27 days were imposed. Fines amounting to \$8,671 were assessed and 745 fugitives from justice were located.

Violations of the various Federal statutes relating to the theft, embezzlement, and illegal possession of government property in view of the war situation were given particular and vigorous investigative attention by the FBI. A total of 634 convictions resulted from prosecutions in Federal courts. Sentences totaling 1,139 years, 2 months, and 9 days were recorded, while fines, savings, and recoveries amounted to \$67,099.

In view of the increased movement of war materials over various transportation systems, investigations of violations pertaining to thefts from interstate shipments increased substantially; 333 convictions were recorded in Federal courts during the fiscal year 1943 and sentences totaling 837 years and 11 months were imposed; fines and recoveries amounted to \$20,649.

The FBI concentrated its attention on violations involving the White Slave Traffic Act and the May Act. The latter regulation prohibits prostitution and related crimes in the vicinity of military and naval establishments when its provisions are invoked by the military authorities. A total of 1,086 convictions with sentences totaling 2,129 years, 6 months, and 45 days was recorded during the fiscal year 1943 and fines amounting to \$94,252 were assessed.

Numerous other violations of statutes within the investigative jurisdiction of the FBI received attention during the fiscal year 1943. Several extensive lottery syndicates engaged in nationwide distribution of lottery tickets were successfully prosecuted and a total of 144 convictions were noted.

There were 36 convictions for Crimes on the High Seas, 379 convictions for crimes on Indian and Government reservations, 52 convictions for violations of the National Firearms and Federal Firearms Acts, and 746 convictions for violations of the Impersonation and Illegal Wearing of the Uniform Statutes. Certain civil matters such as War Risk Insurance claims, applications for executive clemency of persons previously convicted of felonies in Federal courts, and Court of Claims matters were also handled. In the latter classification savings and recoveries of \$22,079,414 were realized.

The Identification Division of the FBI, which was established in 1924 with 810,188 fingerprint cards, experienced its greatest growth and service to law enforcement, the armed forces, war industries, governmental organizations, and law-abiding citizens during the fiscal year 1943. Averaging a receipt of 93,540 sets of fingerprint cards daily, 69,644,540 fingerprint cards were on file on June 30, 1943. The rapid growth of this section of the FBI necessitated its transfer from the Department of Justice Building to greater quarters in the National Guard Armory in the District of Columbia. The identification of mangled bodies in airplane crashes, drowned seamen washed ashore, and victims of other catastrophes demonstrated the infallibility of fingerprinting as a means of identification.

The achievements of the FBI Laboratory for the fiscal year 1943 surpassed those of any previous year. A total of 193,371 examinations involving 247,886 individual specimens of evidence was conducted by Laboratory technicians, the major part of which was directly concerned with the nation's war program.

The FBI National Police Academy continued its service to law enforcement during the fiscal year 1943. Three sessions were held and 113 police officers from various parts of the country and Canada graduated from this school. As of June 30, 1943, there were 740 men who had received the benefits of this training to the service of approximately 100,000 local law enforcement officers.

J. EDGAR HOOVER.

FEDERAL COMMUNICATIONS COMMISSION (FCC). The regulatory agency of the Federal Government for interstate and foreign communications by wire and radio during 1943 devoted an increasing portion of its time to communications problems arising out of the war. The FCC cooperates closely with the Board of War Communications, established by Executive Order in September, 1940, and the FCC Chairman is also Chairman of the Board.

An important war service is rendered by the Commission's Radio Intelligence Division, set up in July, 1940. Engineers in this Division maintain

a round-the-clock patrol of the radio spectrum to guard against its use for illegal or subversive purposes. A continuous watch is maintained for Fifth Column radio transmitters which might attempt to contact Axis agents abroad or aboard submarines lying well offshore. RID also traces sources of interference to military and commercial radio broadcasts, enforces wartime regulations to insure safe communications, and through highly sensitive radio direction-finding equipment assists ships and planes in distress. To do this work, RID operates a net of 12 primary monitoring stations, 79 secondary stations strategically located throughout the United States and its possessions; three intelligence centers in Honolulu, San Francisco, and Washington, D.C.; and 90 mobile patrol units, some 30 of which cruise the 5,000 mile shoreline of our Atlantic, Gulf, and Pacific Coasts keeping special watch for illegal ship-to-shore radio signals. During the fiscal year 1943, 3,960 cases of illegal radio operation were investigated by RID engineers.

The Commission's Foreign Broadcast Intelligence Service has the job of keeping Government agencies informed of the content of foreign radio broadcasts as an aid in mapping foreign policy and countering enemy propaganda. At year end, FBIS was surveying 2,500,000 words a day of foreign broadcast material in 35 languages and dialects. At five powerful listening posts FBIS monitors were intercepting broadcasts from all parts of the world. During the year cooperative arrangements were completed with the Office of War Information, the British Ministry of Information, the British Broadcasting Corporation, and listening posts of other friendly nations for coverage and transmission to FBIS of foreign broadcast material not well heard in this country. In the form of minute-by-minute bulletins over FBIS wire services, of daily reports, and weekly analyses, selected items from the vast amount of material monitored are sent on to some 1,000 officials of this government and to representatives of the United Nations. Considerable information obtained from foreign broadcasts is released to the press through the Office of War Information.

Other Commission war activities in 1943 included: A comprehensive "security" survey by engineers in the Security Section (set up October, 1942) of international radiotelegraph, radiotelephone stations, key broadcast stations, cable properties and the more important offices of the Bell Telephone System; a survey of domestic foreign-language programs; a catalogue of surplus and salvageable broadcast equipment for use by the military or war agencies; an overall report to the Board of War Communications (q.v.) on the speed and adequacy of wartime telegraph service; and frequency allocation studies for the State, War, and Navy Departments.

To prolong the life of radio equipment without noticeable effect on the broadcast signal, FCC Order 107 (November, 1942) required readjustments of broadcast transmitters decreasing radiated power by one decibel. During the year the Commission authorized a voluntary reduction in time of operation of standard broadcast stations from 12 hours, in the case of unlimited time stations, to six hours a day.

Relaxing somewhat its wartime "freeze" on the use of manpower and materials in the construction of civilian radio facilities, the FCC in August, 1943, announced that it would authorize construction involving the use of *idle* equipment to increase the power of 100-watt local channel standard

broadcast stations to 250 watts and for construction of new local channel stations in communities where no radio station is now located (excluding those communities located in metropolitan districts already receiving radio service). Multiple ownership of standard radio broadcast stations serving substantially the same area was banned November, 1943, and in December the license period of standard broadcast stations was extended from two to three years, maximum statutory limit under the Communications Act.

In the telephone field, the largest single rate investigation of the year terminated when the FCC announced January, 1943, that the American Telephone and Telegraph Long Lines Department had agreed to a reduction in the rate for interstate and private line services which will result in a saving to the public of upwards of \$34,700,000 annually.

Most important development in the telegraph industry was the merger of Western Union and Postal Telegraph, Inc., the two major domestic competing telegraph carriers. This integration was authorized in permissive legislation by Congress March, 1943, and after extensive hearings from July through September, the Commission approved the merger plan of the two companies Sept. 27, 1943.

The Supreme Court handed down two important decisions in the field of radio. The cases of *National Broadcasting Company v. United States* and the *Columbia Broadcasting System v. United States*, both of which were decided in favor of the FCC, May 10, 1943, represented the last phase of litigation challenging the validity of the chain broadcasting regulations. These "antimonopoly" regulations are designed to foster competition in network broadcasting, to eliminate restraints imposed by networks on affiliated stations, and to expand "listening" opportunities of radio audiences.

In *Federal Communications Commission v. National Broadcasting Company (KOA)*, the Supreme Court on May 17, 1943, affirmed the District Court of Appeals' decision favoring KOA. The Court held that a Class I station licensee was entitled to intervene in proceedings on an application which, if granted, would permit night-time operation of another station on the channel occupied by the Class I licensee.

During the year two bills were introduced, one each in the Senate (S. 814) and House (H.R. 1490) to amend substantially the Communications Act of 1934 under which the FCC operates. Hearings on the Senate bill were held in November and December, 1943, before the Interstate Commerce Committee. No hearings have yet been called on H.R. 1490.

Present members of the Commission are James Lawrence Fly, Chairman; Paul A. Walker, Norman S. Case, T. A. M. Craven, Ray C. Wakefield, and Clifford J. Durr.

See LAW under *Supervision of Federal Agencies*. See also COMMUNICATIONS, ELECTRICAL, and separate article on WAR COMMUNICATIONS, BOARD OF.

FEDERAL COUNCIL OF THE CHURCHES OF CHRIST IN AMERICA. An organization established in 1908 by 28 Protestant denominations to act for them in matters of common interest. At the end of 1943 it included most of the major Protestant denominations of the United States and also two branches of the Eastern Orthodox family. The total number of members included in the Council's constituency in 1943 was 25,551,560.

The program of 1943 was marked by a strong emphasis on the tasks created by the war. The

Commission on Army and Navy Chaplains carried on its work in Washington, D.C. The Commission on Camp and Defense Communities, with the collaboration of the Home Missions Council, assisted the churches facing enlarged responsibilities because of their proximity to camps or new wartime industries. A Committee on Conscientious Objectors represented the interest of the cooperating churches in the men rendering their "work of national importance" in civilian camps. A Committee on Overseas Relief and Reconstruction, with the collaboration of the Foreign Missions Conference, coordinated the efforts in behalf of refugees, prisoners of war, the suffering in China, children in unoccupied France, missionaries cut off from their normal bases of support. It also inaugurated a plan for united assistance to the churches of Europe after the war. A Commission on Aliens, with special reference to interned aliens in America, was established after the United States entered the war. It launched a program for resettling Japanese-Americans in new homes through the cooperation of local churches. The Commission to Study the Bases of a Just and Durable Peace in March, 1943, issued a statement, popularly known as "Six Pillars of Peace," which has been widely accepted as a platform of postwar objectives. Collaboration with the United Service Organizations (q.v.) was a major aspect of service.

A new Commission on the Church and Minority Peoples was created during the year with a view to strengthening the influence of the cooperating churches in promoting a greater unity among the diverse groups that make up the American community.

The Council continued the National Christian Mission especially in military camps, with the cooperation of army and navy chaplains. Interdenominational conferences on family life, on religion and health, on Christian social work, on interracial cooperation, and on public worship were held in the different regions of the nation. Ten religious programs over national radio networks were presented each week throughout the year. *Information Service* was published weekly as an analysis of social, international, and interracial problems of special interest to the churches and the *Federal Council Bulletin* as the official organ of the Council.

Officers in 1943 were: President, Rt. Rev. Henry St. George Tucker; vice-president, Dr. J. McDowell Richards; treasurer, Harper Sibley. The general secretary is the Rev. Samuel McCrea Cavert. National offices are at 297 Fourth Avenue, New York City. An office is maintained in the Woodward Building, Washington, D.C.

FEDERAL DEPOSIT INSURANCE CORPORATION (FDIC). An independent agency of the U.S. Government, organized under the Banking Act of 1933 to insure the deposits of all banks which are entitled to the benefits of insurance under the law. The major functions of the Corporation are to pay off the depositors of insured banks closed without adequate provision having been made to pay claims of their depositors, to act as receiver for all suspended national banks and for suspended State banks when appointed by State authorities, and to prevent the continuance or development of unsafe and unsound banking practices. The Corporation may also make loans to or purchase assets from the insured banks when such loans or purchases will facilitate a merger or consolidation and will reduce the probable loss to the Corporation. Chairman in 1943, Leo T. Crowley. See BANKS AND BANKING.

FEDERAL HOME LOAN BANKS. See NATIONAL HOUSING AGENCY; RECONSTRUCTION FINANCE CORPORATION.

FEDERAL HOUSING ADMINISTRATION (FHA). See NATIONAL HOUSING AGENCY.

FEDERAL POWER COMMISSION. An independent agency of the U.S. Government, first established in 1920, which has jurisdiction over water power projects on navigable streams or affecting interstate or foreign commerce, or upon public lands, and over the interstate movement of electric energy. It also regulates the transportation or sale of natural gas in interstate commerce under the Natural Gas Act. Chairman in 1943: Leland Olds. See ELECTRIC LIGHT AND POWER; LAW under *Supervision of Federal Agencies*.

FEDERAL PUBLIC HOUSING AUTHORITY (FPHA). See NATIONAL HOUSING AGENCY.

FEDERAL RECREATION BUILDINGS. See FEDERAL SECURITY AGENCY.

FEDERAL RESERVE SYSTEM. An agency of the U.S. Government established in 1913 for more effective supervision of banking in the United States and for other purposes. The System comprises the Board of Governors; the Federal Open Market Committee; the 12 Federal Reserve Banks and their branches situated in different sections of the United States; the Federal Advisory Council; and the member banks, which include all national banks in the United States and such State banks and trust companies as have voluntarily applied to the Board of Governors for membership and have been admitted to the System. Chairman in 1943: Marriner S. Eccles. See BANKS AND BANKING; BUSINESS REVIEW.

FEDERAL SAVINGS AND LOAN INSURANCE CORPORATION. See NATIONAL HOUSING AGENCY.

FEDERAL SECURITY AGENCY (FSA). An agency of the U.S. Government which was established July 1, 1939, as a result of the Reorganization Act passed by the Congress earlier in that year, to promote "social and economic security, educational opportunity, and the health of the citizens of the nation." It brings together Government agencies having related responsibilities in these broad fields. As the Agency is presently constituted, its component units are the Public Health Service, under which is Freedmen's Hospital; the Office of Education; the Social Security Board; the Food and Drug Administration; the Office of Vocational Rehabilitation; and Saint Elizabeths Hospital. It also represents Federal participation in the work of Howard University, the Columbia Institution for the Deaf, and the American Printing House for the Blind. (See separate articles on the first five of the component agencies.)

Since the beginning of the national defense program, the need for maintaining essential health and welfare services in wartime has been recognized. Because of the close relationship between this emergency need and the continuing programs of the Federal Security Agency, the Federal Security Administrator was appointed by the President, in November, 1940, to direct the coordination of services in this sector of national mobilization. This function, carried out through the Office of Defense Health and Welfare Services from September, 1941, was transferred to the Federal Security Agency by an Executive Order in April, 1943. Under this order, the Office of Community

War Services was established as an integral part of the Agency, as was a Committee on Physical Fitness.

Office of Community War Services. This office serves as a correlating center for health and welfare activities both within the Federal Security Agency and in other Federal and private national organizations. Throughout the country it works through State administrative agencies and with State and local defense councils and other community planning groups to stimulate the development of local health and welfare activities related to the war.

For recreation, social protection, and, during a limited period, for day care for children of working mothers—fields where national war programs were needed—the Federal Security Agency, through the Office of Community War Services, assumed direct responsibility. In these programs it aided hard-pressed communities in war areas to develop effective local services and helped them take advantage of all the facilities available through national and State, as well as local, agencies.

The *Division of Recreation* is concerned with the organization of community leisure-time activities for members of the armed forces on leave and for the civilian population in war-area communities. Its purpose is to maintain and strengthen morale, to promote mental and physical health and well being, to speed war production, to safeguard the health of children and young people.

In carrying out its program, the Division works with established agencies, encouraging the initiative and local responsibility of communities, counties, and States. Operation of the program is carried out through a staff of field representatives. Working in 2,462 cities and towns during the past two years, recreation specialists have stimulated and implemented community action on recreation needs for service men, war workers and their families, and youth. When communities are unable to do the whole job without jeopardy to their financial structure, the Division seeks supplementary assistance for them from the Federal Government and national private agencies, sees that the funds are used to achieve a good distribution of services and assists in maintaining the quality of service.

To get the job done, the Division, as of June 30, 1943, had organized more than 1,200 local War Recreation Committees, widely representative of civic, professional, fraternal, labor, and religious groups. In addition, 207 area, county, and State organizations have been established to bring to bear on local problems the counsel and resources of geographically larger groups.

The procedure in field operation varies with the problem and the development of the program, although the approach follows a basic pattern: in anticipation of a local problem, or at the request of the Army, the Navy, the War Manpower Commission, State, or community officials, the field representative comes to the town; after discussing the situation with the Mayor and civic leaders, he makes a careful study of available resources, assesses the problems and presents the findings and recommendations at a meeting of all groups concerned. To assume responsibility for the tasks indicated, to do over-all community planning and supervision, to raise money and allocate it, a local War Recreation Committee is usually formed. Within its framework will be subcommittees concerned with the needs of service men, war workers, and youth.

To serve the 1,341 Army posts, camps, and stations and the 350 major Naval establishments in

the continental United States, the Division had helped in setting up 2,555 service men's centers as of July 1, 1943. Of these, 1,514 are operated by local communities or established local agencies, and 1,041 by the United Service Organizations (q.v.). In cooperation with the Army and Navy, 53 overseas recreation programs had been established in ten territorial possessions and foreign nations, other than in combat areas, where concentrations of American armed forces are stationed.

In the 1,476 counties with war plants, field representatives have helped to establish 742 centers and outdoor areas for war workers and their families. The United Service Organizations manage 134 of these, and communities, using either local or Federal funds, or both, operate 608. Additional service is being rendered war workers and families in 704 public and private housing projects by the promotion of full use of recreation facilities; by setting up tenant associations; integrating newcomers into the community; by assisting in selection of professional personnel; by initiating volunteer training courses; and by aiding in programming. Plant management, realizing that workers are less likely to stay on a job or in a town that does not provide minimum recreation opportunities, is likewise requesting the assistance of field representatives.

To certify to the Federal Works Agency the need for the 295 Federal Recreation Buildings constructed as of June, 1943, at a cost of 25 million dollars, comprehensive community studies were made by the Division. As of July 1, 1943, 144 additional War Public Works facilities involving either new buildings or renovations were in process of construction or final approval. Similar community studies have been necessary to certify to the need for 140 War Public Service projects granted as of June, 1943, involving the allotment of Federal funds for the maintenance and operation of recreation programs by communities in behalf of enlisted personnel and war workers.

The assistance of the staff is sought and used continuously in technical capacities by a score of Federal agencies—by the War and Navy Departments in establishing harmonious relations between the special service officers and Navy Recreation officers on posts and in communities adjoining camps and bases, in assessing needs and expediting the procurement of recreation facilities and services; by the War Production Board in determining the validity of thousands of commercial and noncommercial applications for priorities in the recreation field, and in determining civilian requirements for amusement and recreation equipment and materials; by the Office of Price Administration in determining the validity of requests for additional food requirements by recreation institutional users in military and war industrial communities; by the War Manpower Commission and the Congested Production Area Committee in appraising recreation needs and resources as they relate to manpower utilization and increased production schedules; by the Office of Defense Transportation in determining the validity of travel requests in connection with camps and other recreation activities; by the Federal Public Housing Authority in securing leadership and in supervision of recreation areas in housing projects.

The *Social Protection Division* was established to implement the Federal Government's policy, adopted as a part of the defense program, for the repression of prostitution as a means of venereal

disease control. Responsibility for such measures is in the hands of local law enforcement officials and the work of the Social Protection Division has been directed toward increasing the effectiveness of their efforts by: stimulating local law enforcement activities for the repression of prostitution; obtaining public support for repression; coordinating the work of law enforcement agencies with that of health, welfare, and military agencies; assisting in the organization of community programs for the prevention of prostitution and sexual promiscuity; working with the Public Health Service in the establishment of rapid treatment centers for the treatment of venereal disease and in setting up social and redemptive services in these centers; and enlisting the cooperation of both local and national organizations of the hotel, taxicab, tourist court, and liquor industries to prevent their use to facilitate prostitution activities.

The Division operates through 40 representatives in the field and a small administrative staff in Washington. This staff works in close cooperation with the Army, the Navy, the Public Health Service, and the American Social Hygiene Association.

Both at the national level and in the individual military establishments, it works with the armed forces for the purpose of protecting the military services from venereal disease existing among our civilian population. The Army and Navy Venereal Disease Control Officers provide representatives of this Division with information in regard to the communities and areas which are alleged to be places of pick-up and exposure by infected service personnel. More detailed information is supplied by the Army and Navy Venereal Disease Control Officers to the local health departments and the local police departments, which is used to locate civilians to whom infections have been attributed. The relationships between the police and health departments and individual military establishments have been largely developed by representatives of the Social Protection Division.

Two committees have been established to advise the Social Protection Division: the Federal Security Administrator's National Advisory Police Committee on Social Protection and the National Women's Advisory Committee on Social Protection.

During the 1942 and 1943 fiscal years considerable progress was made toward the repression of prostitution, and the closing of red light districts as measures of venereal disease control. Red light districts have been closed down in more than 350 communities in the United States. Army and Navy venereal disease rates have reached their lowest point in history, an accomplishment in which this Division has played a large part.

About 200 Social Protection Committees have either been established in cities and communities, or are now in stages of formation. These committees include representatives of local law enforcement, health, welfare, and civic organizations, officials concerned with the control of venereal disease, and citizens of the community. These committees are working to stimulate and to help develop local community venereal disease control programs.

The Division has obtained the cooperation and support of the International Association of Chiefs of Police, the National Sheriff's Association, the American Bar Association, and several national organizations representing private industry, and it has obtained the support, through its National Women's Advisory Committee on Social Protection, of the club women of the nation.

Through the Federal Security Administrator's

National Advisory Police Committee, the Division has aided in the development of specific enforcement techniques for use in the repression of prostitution. These techniques have been issued in printed form under the title *Techniques for the Repression of Prostitution*. (See also JUVENILE DELINQUENCY.)

On Aug. 12, 1942, the Chairman of the War Manpower Commission issued a directive requesting this Office to develop, integrate, and coordinate Federal programs for the care of children of working mothers. To carry out this responsibility, the *Day Care Division* was set up. For a period of 10 months the Division gave direction to the program, integrated the activities of cooperating agencies, and allocated a fund of \$400,000 made available from the President's Emergency Fund.

The Day Care Division administered this \$400,000 allocation in collaboration with the Children's Bureau and the Office of Education. Field services were provided through these agencies. The Office of Education assigned to regional offices specialists on extended school services to assist State departments of education in developing their services. Similarly, field consultants of the Children's Bureau were assigned to work on the welfare aspects of the program. Regional Directors of the Office of Community War Services were made responsible for facilitating clearance and joint planning between these and other Federal agencies, including the U.S. Employment Service; the Recreation Division, Office of Community War Services; the Bureau of Public Assistance, Social Security Board; the National Housing Agency; the Farm Security Administration, Department of Agriculture; the Federal Works Agency; and the Office of Civilian Defense. Funds were made available to State departments of welfare and education for the employment of personnel to study, develop, coordinate, supervise, and administer the program of services to children of working mothers in the States and localities having need of these services. The administrative and supervisory functions of the welfare and school authorities were integrated through the media of State and local committees made up of representatives of the administrative agencies, other related agencies, labor, industry, and civic groups.

Thirty-five State departments of education and 28 State departments of welfare received Federal funds to employ personnel to plan and develop necessary services. These grants covered 40 States, the District of Columbia, and Hawaii, and in 27 States the State departments of both welfare and education received Federal funds. The approved grants to States provided for the services of 222 workers. About one-fourth of these workers were assigned to State offices and about three-fourths to particular critical labor shortage areas.

The marked progress in the provision of adequate services throughout the country for children of working mothers during the first six months of 1943 was due primarily to the personnel supplied to the State departments and assigned to particular localities through use of the \$400,000 from the Emergency Fund of the President; this was terminated June 30, 1943. Recommendations relative to changes in the administration of the program were formulated in collaboration with the appropriate agencies and submitted to the War Manpower Commission, the Bureau of the Budget, and Congress.

Committee on Physical Fitness. The general objective of this Committee is to promote among individuals of all ages an interest in the improvement

of their health and physical condition as a contribution to the war effort. The Wartime Council on Physical Fitness, appointed by the Federal Security Administrator, serves it in an advisory capacity. The Committee's aim is to promote the establishment of effective State and community organization and the fullest assumption of responsibility for physical fitness in schools and colleges, and in the various private national organizations interested in this field.

Its subcommittee on State and local organization is responsible for development of the physical fitness program through State and local government channels. The subcommittee on schools and colleges has the responsibility of promoting the development of physical fitness programs in educational institutions; it cooperates in these activities with the Office of Education. That on institutional planning has similar responsibilities relating to special-interest groups including labor and veterans' organizations, Parent-Teacher Associations, service clubs, and farm and industry groups. As of June, 1943, State directors of physical fitness had been appointed by the Governors and programs were under way in 38 States.

In addition to the special wartime measures adopted by the Federal Security Agency, each of its constituent units has been called upon to expand and adapt its programs to meet the needs of the times.

PAUL V. McNUTT.

FEDERAL—STATE CONTROVERSIES. See LAW under *Decisions Concerning the Federal System*; also (re soldier vote) UNITED STATES.

FEDERAL TRADE COMMISSION (FTC). An independent agency of the U.S. Government, established in 1914, which has the following threefold purpose: To promote free and fair competition in interstate trade in the interest of the public through prevention of price-fixing agreements, boycotts, combinations in restraint of trade, unlawful price discriminations, and other unfair methods of competition and unfair and deceptive acts and practices; to safeguard life and health of the consuming public by preventing the dissemination of false and fraudulent advertisements of food, drugs, cosmetics, and devices which may be injurious to health; and to make available to the President, the Congress, and the public factual data concerning economic and business conditions as a basis for remedial legislation where needed, and for the guidance and protection of the public interest. Since the outbreak of war the staff has been concerned largely with special war work. Chairman in 1943: Garland S. Ferguson.

FEDERAL WORKS AGENCY (FWA). An agency of the U.S. Government which comprises those agencies dealing with public works and the administering of Federal loans and grants for construction. The component agencies are:

- Public Buildings Administration
- Public Roads Administration
- Public Works Administration (in liquidation)
- Work Projects Administration (in liquidation)
- Federal Fire Council
- Federal Real Estate Board

War public works are under the direction of the Federal Works Administrator, who may construct projects directly or use any constituent units of the Agency or other proper Federal or non-Federal organizations to expedite this phase of the War Program, under authorizations by the President. As of

Aug. 31, 1943, a total of 4,180 War Public Works and Services projects had been approved by the President, to cost an estimated total of \$450,398,-373.

Included in the Services projects are nursery schools and child care centers. Administrator in 1943; Maj. Gen. Philip B. Fleming. See PUERTO RICO under *History*.

FEDERATED MALAY STATES. See BRITISH MALAYA.

FENCING. Members of the Fencers Club of New York dominated their sport last season in a year that found the men's national team championships abandoned because of the war. Dr. Norman Armitage continued as king of the saber men, winning top honors with that weapon for the fifth successive time. Robert Driscoll took the épée crown after ten years of trying and Miss Helena Mroczkowska gave the club its third major U.S. title when she regained the women's championship she had won in 1940. Warren Dow of the New York A.C. was best with the foil and the Salle Santelli four of the Misses Madeline Dalton, Grace Accl, Maria Cerra, and Aida Condosta won the U.S. women's team title.

Navy ended the reign of New York University as three-weapon ruler in the Intercollegiate Association, taking the épée and saber team crowns away from the Violet at the same time. Midshipman Russell Blalack added to the Annapolis victories by taking individual épée honors. N.Y.U., however, captured the coveted Little Iron Man Trophy by winning the team foil championship, Robert Kaplan of the Violet annexing the individual prize to become the first freshman to carry off a title in the intercollegiate tourney. Army's Coleman Richards was best with the saber.

New Jersey State Teachers kept the women's intercollegiate championship. Miss Grace Accl, then in her last year at Cornell University, won the individual title for the third time.

THOMAS V. HANEY.

FERNANDO PO. See SPANISH GUINEA.

FERRO-CHROME. See CHROMIUM.

FERRYING DIVISION, WOMEN'S AUXILIARY FERRYING SQUADRON (WAFS). See AERONAUTICS under *The Air Transport Command*.

FERTILIZERS. See CHEMISTRY; also, PALESTINE under *History*; SANITATION.

FESTIVALS. See MUSIC.

FHA. Federal Housing Administration. See NATIONAL HOUSING AGENCY.

FICTION. See LITERATURE; articles on foreign literatures.

FIJI. A British colony in the southern Pacific, consisting of some 250 islands (80 inhabited) and the dependent islands of Rotuma. Total area, 7,083 square miles. Total population (Jan. 1, 1942), 227,280 (107,104 Fijians, 101,841 East Indians, 4,494 Europeans, 2,236 Chinese, 5,229 of European and native descent, 3,175 Rotumans, and 3,201 others). Suva (capital), including suburbs, had 15,522 inhabitants (1936). Education (1941): 419 schools and 32,511 students enrolled.

Production and Trade. The principal products are sugar, copra, bananas, pineapples, copal, native foodstuffs, and gold. There are 3,697 square miles of forests, from which are produced both hardwoods and softwoods. Livestock (1939-40): 84,000 cattle, 27,000 goats, 16,800 horses, donkeys, and mules, and 8,500 pigs. Trade, (1942): imports £2,216,716 (foodstuffs and manufactured goods were the main items); exports £2,142,442 (sugar

131,294 tons valued at £1,761,055, copra 16,861 tons £252,544, bananas £42,400, canned pineapples £17,040).

Communications. During November, 1941, Suva became a port of call in Pan American Airways' regular transpacific service between the United States and New Zealand. Roads (1940): 2,331 miles. There are several wireless telegraph stations on the islands.

Government. Finance (1941): revenue £1,124,210; expenditure £1,069,046. Public debt (Dec. 31, 1941), £1,574,692. A governor, assisted by an Executive Council, administers the colony. There is a Legislative Council consisting of the Governor as president, 16 official members, 5 European members (3 elected, 2 nominated), 5 Fijian members (nominated by the Governor from a list submitted by the Grand Council of Chiefs), 5 East Indian members (3 elected, 2 nominated). The chiefs control the native administration under the Governor's supervision. Governor of Fiji and High Commissioner for the Western Pacific, Maj. Gen. Sir Philip Mitchell (appointed June 16, 1942).

History. It was reported in Suva, Fiji, May 14, 1943, that the first group of Fijian regular troops to serve overseas had arrived at an advanced station in the Pacific area.

FILMS. See MOTION PICTURES; PHOTOGRAPHY; topics listed under TRAINING FILMS. For *Film Bulletins*, *Film Strips*, see PHOTOGRAPHY.

FINANCE. See BANKS AND BANKING; BUSINESS REVIEW; FINANCIAL REVIEW; PUBLIC FINANCE; TAXATION; foreign countries under *Finance*; UNITED STATES under *Congress*.

FINANCIAL REVIEW. The financial markets were called upon to absorb the largest volume of financing ever consummated in one year during 1943. The Treasury carried on two war loan drives in April and September, and offered securities at other times for cash or in exchange for maturing obligations. During the year, over \$36,600,000,000 of bonds, notes, and certificates of indebtedness were sold for cash, and almost \$10,000,000,000 more were issued in exchange for maturing obligations. In addition, the Treasury raised some \$12,000,000,000 through net sales of war savings bonds, and increased the amount of Treasury bills outstanding by over \$6,400,000,000 during the year.

This huge volume of Treasury financing further curtailed corporate security flotations. These declined to the lowest level in a long period of years, reflecting the fact that the Government was providing both fixed and working capital for industries engaged in the war effort, so that private financing was seldom called for. This was markedly different from the experience during the first World War, when industry was expected to provide a much larger part of the capital needed to finance war production, and a Capital Issues Committee was set up in order to determine which new issues should be permitted as necessary for the war effort. (See PUBLIC FINANCE.)

The Stock Market. Stock prices enjoyed a broad advance during 1943, continuing the major rise which began in April, 1942. Several factors contributed to the upturn in stock prices. First, opposition in Congress to material increases in corporate taxation provided assurance that large wartime earnings would not be cut down further by raising corporate income and excess profits tax rates. (See TAXATION.) Secondly, the favorable course of the war indicated that fears of a long

drawn out conflict, which accompanied the sharp decline of the market in the spring of 1942, were not justified. In the third place, the revolt in Congress against social reforms and various New Deal policies promised that economic measures more favorable to business could be expected, both during the war period and more especially in the post-war era. The advance in the market continued with but minor interruptions until July, when the fall of Mussolini brought a reaction because it was felt that the end of the war might be very near. While it was generally recognized that, following a period of transition, a high level of business activity was probable because of widespread shortages of consumer durable goods, it was evident that the transition would require a number of months during which industrial activity would be at low ebb, unemployment would be widespread, and corporate earnings would fall to a low level. As it became evident that Germany would continue the war without her Axis partner, the market firmed. Selling to establish losses or gains for tax purposes had a depressing effect during November and early December.

The highs and lows of the *New York Times* stock price averages are shown as follows:

TABLE 1—STOCK MARKET AVERAGES, 1943
(60 Stocks—25 Rails and 25 Industrials)

Month	High	Low	Last
January.....	87.08	82.31	86.99
February.....	90.58	86.24	90.28
March.....	93.99	88.46	93.54
April.....	95.12	89.62	94.01
May.....	99.16	93.90	99.07
June.....	100.21	95.82	100.13
July.....	102.01	93.51	93.79
August.....	95.81	92.40	93.90
September.....	98.32	93.61	96.82
October.....	97.17	93.37	95.30
November.....	95.72	88.70	89.04
December.....	93.20	89.02	92.10

Railroad stocks enjoyed substantial advances during the year as the carriers reported earnings only slightly below 1942 levels. (See RAILWAYS.) Public utility securities participated prominently in the year's rising stock markets. The attitude of the Securities and Exchange Commission was somewhat modified toward the administration of the "death sentence" provisions of the Public Utility Holding Company Act of 1935. The SEC displayed less insistence upon interpreting the law in a manner least favorable to the holding companies, and approved plans which enabled such leading holding company systems as United Gas Improvement, National Power & Light and Cities Service Power & Light to make substantial progress toward liquidation. Very sharp advances occurred in a number of holding company securities as the market discounted the elimination of some of the uncertainties surrounding these issues, as well as increased break-up values. (See ELECTRIC LIGHT AND POWER.)

Industrial stocks benefited from the higher level of corporate earnings, but investors showed a tendency to shift from issues heavily dependent upon war business to those that would participate in the expected postwar expansion of consumer durable goods industries. This was especially so during the last half of the year, when trading was influenced to a large extent by the belief that the end of the war was approaching and that war contractors faced the risk of large-scale termination of contracts. The high, low, and closing prices of leading issues listed on the New York Stock Exchange during 1943 are shown in Table 2 in the next column.

TABLE 2—PRICES OF ACTIVE STOCKS, 1943

Stock	High	Low	Close	Net Change
Adams Express.....	13	7½	11	+3½
Alaska Juneau.....	7½	3½	6	+2½
Allegheny Corp.....	3½	1½	2½	+1½
Allied Mills.....	37½	16½	32½	+15½
Allied Stores.....	16½	6½	15½	+8½
Allis-Chalmers Mfg.....	43½	26½	38½	+11½
American Airlines.....	70½	52	60	+4½
American Cable & Radio.....	9½	3½	8½	+4½
American Can.....	91½	71½	83½	+11½
American Car & Foundry.....	45½	24½	34½	+8½
American Distilling.....	128	15½	113½	+98½
American Locomotive.....	17½	7½	16	+8½
American Power & Light.....	4½	1½	2½	+1½
American Rad & S.S.....	11½	6½	9½	+3½
American Ship Bldg.....	32½	25	26½	-4½
American Smelt. & Ref.....	47½	36	36½	-2½
American Tel. & Tel.....	158½	127½	156½	+28½
American Viscose.....	39½	32	43	+10
American Water Works.....	9	3½	6½	+3½
Anaconda Copper.....	31½	24½	24½	+½
Atchison, To. & S.F.....	67½	44½	54	+8½
Atlantic Coast Line.....	38	24½	25½	-1½
Atlas Corp.....	13½	6½	11½	+5½
Aviation Corp.....	6½	3½	3½	+½
Baldwin Locomotive.....	20½	10½	20½	+9½
Baltimore & Ohio.....	10	3½	5½	+2½
Bell Aircraft.....	20½	9½	11	-8½
Bendix Aviation.....	39½	33	34½	+½
Best Foods.....	17	8½	16	+7½
Bethlehem Steel.....	69½	54	56½	-7½
Boeing Airplane.....	21½	11½	14½	-7½
Canadian Pacific.....	11½	5½	8½	+2½
Cert-teed 6% pf.....	72½	32½	59½	+27½
Chesapeake & Ohio.....	50	33½	45	+11
Chrysler Corp.....	85½	56½	81½	+13½
Columbia Gas & El.....	5½	1½	4½	+2½
Commercial Solvents.....	16	9½	14½	+5½
Commonwealth Edison.....	27	21½	24½	+3½
Consolidated Edison.....	24½	15½	22½	-7
Consolidated Vultee.....	21½	9½	11½	-½
Crucible Steel.....	38	27½	28½	-4½
Curtiss-Wright.....	9½	5½	5½	-1
DuPont de Nemours.....	159½	134	139½	+5
Firestone Tire & Rubber.....	43	25½	39½	+12½
General Electric.....	39½	30½	36½	+5½
General Motors.....	56	44½	52½	+8½
Goodyear Tire & Rubber.....	41½	25½	38½	+12½
Hazel-Atlas Gl.....	110½	93½	106½	+11½
Hercules Motors.....	29½	12½	27	+14½
Homestake Mines.....	42½	31	40	+8½
Houston Oil.....	9½	3½	7½	+4
Illinois Central L.L.....	48	37	46	+9
International Harvester.....	74½	56½	72	+12½
International Nickel.....	36½	25	26½	-2½
International Paper.....	14½	8½	14½	+6
International Tel. & Tel.....	16½	6½	12½	+5½
Johns-Manville.....	92½	70	84½	+12
Jones & L. Stl.....	26½	19½	20½	+1½
Kennecott Copper.....	35½	258½	30½	+1½
Lockheed Aircraft.....	25½	12½	15½	-1
Montgomery Ward.....	50	33½	45½	+12
Nash-Kelvinator.....	15½	6½	12½	+6½
National Biscuit.....	23	15½	20½	+5
National Dairy Prod.....	21½	14½	19½	+4½
New York Central.....	20	10½	15½	+5½
North American Company.....	18½	9½	17	+7
Northern Pacific.....	18½	7½	14½	+7½
Ohio Oil.....	21½	11½	18½	+6½
Pan Amer. Airways.....	43½	23½	31½	+6
Paramount Pictures.....	30	15½	23½	+7
Penn. P.R.....	32½	23½	26½	+2½
Pepsi-Cola.....	59½	28½	51½	+22½
Phillips Pet.....	50	42½	46	+1
Pure Oil.....	19½	11	16½	+4½
Radio Corp.....	12½	4½	9½	+4½
Republic Steel.....	20½	14	17½	+3½
Schenley Distill.....	44½	19½	41½	+20½
Sears Roebuck.....	90½	59½	89	+27½
Sinclair Oil.....	13½	7½	10½	+3
Socony-Vacuum.....	15½	10½	12½	+2½
Southern Pacific.....	30½	15½	24½	+8½
Sperry Corp.....	35½	23½	26½	+2½
Standard Oil, Cal.....	40	28½	37½	+8
Standard Oil, N.J.....	60	46½	54½	+8½
Studebaker Corp.....	15½	5½	14½	+9½
Texas Co.....	53½	41½	48	+6½
Twentieth C.-Fox.....	24½	12½	21½	+7½
United Air Lines.....	33½	17½	23½	+4½
United Aircraft.....	40	24½	27	+1½
United Gas Imp.....	25½	2½	2½	-½
U.S. Steel.....	59½	47½	51	+8½
Warner Bros.....	15½	7½	12½	+4½

The turnover on the New York Stock Exchange during 1943 aggregated 278,741,765 shares, the largest for any year since 1938. March was the

heaviest trading month with a turnover of 36,997,243 shares, while October was the month of the smallest total, with 13,922,678 shares. The volume of trading compared with 125,677,963 shares for 1942. Dividend payments were reported by the Department of Commerce as shown in the following Table 3.

TABLE 3—DIVIDEND PAYMENTS
(In millions of dollars)

	1942	1943
Manufacturing.....	1,790	1,813
Railroads.....	177	201
Mining.....	159	149
Trade.....	214	196
Communications.....	251	240
Heat, light & power.....	424	423
Other.....	514	519
Total.....	3,529	3,541

Dividend payments increased but slightly during the year, and were smaller for some corporate groups, because of the prevailing desire to retain earnings for reserves against contingencies. Total dividend distributions amounted to less than 50 per cent of net income for the year, not counting such reserves.

Blocks of listed stocks were distributed in many cases through "special offerings" on the floor of the New York Stock Exchange. In a total of 61 such offerings, almost a million shares were sold. Two factors, however, tended to check the further expansion of this practice. First, the increased turnover on the stock exchange encouraged sales in the regular way, since there was less fear of a break in price due to the thinness of the market. Secondly, an announcement late in the year that the Rockefeller family planned to dispose of 1,000,000 shares of various Standard Oil stocks to raise funds for the purchase of Government bonds depressed the market for these issues for a time, since it was feared that the floating supply would be increased and their market position impaired. Plans for this largest of all secondary distributions were abandoned, and it is probable that several other large operations of the kind were given up as it was recognized that, when attempted on too large a scale, secondary offerings off the market and special offerings on the exchange could lead to market weakness.

The Bond Market. Because the Treasury carefully adjusted its new offerings to what institutional, corporate, and individual investors could absorb, and because the rank and file of individual investors were being sold nonmarketable obligations, liquidation of which did not depress market quotations, prices of Government bonds remained firm throughout the year, despite the record volume of new financing. The average yield of all U.S. Treasury taxable bonds with maturity or call dates 12 years or more away for December was 2.34 per cent, as compared with 2.36 per cent in December, 1942. For outstanding partially tax-exempt issues, the yield in December, 1943, averaged 1.86 per cent, as compared with 2.09 per cent for December, 1942.

High-grade corporate bonds were generally strong during the year. The very small volume of new issues, and the desire of institutional investors to acquire some corporate obligations for their portfolios along with the huge amounts of Treasury bonds bought during the war loan drives, caused the best grade of corporate obligations to rise to the highest price level on record. The yield on Aaa bonds for December was computed by Moody's at 2.74 per cent, as compared with

2.81 per cent for December, 1942. Yields on other ratings of bonds compared as shown in the following tabulation:

Rating	1942	1943
Aa.....	2.96	2.86
A.....	3.23	3.13
Baa.....	4.28	3.82

The course of corporate bond yields from month to month during the year, as reflected in the averages computed by Moody's Investors Service, is shown below:

TABLE 4—AVERAGES OF BOND PRICES

	Total	Corporate		
		Industrial	Railroad	Utility
Number of issues.....	120	40	40	40
1943—Jan.....	3.27	2.90	3.86	3.05
Feb.....	3.23	2.88	3.78	3.02
March.....	3.20	2.87	3.73	3.00
April.....	3.19	2.87	3.69	3.01
May.....	3.16	2.86	3.64	3.00
June.....	3.14	2.84	3.61	2.98
July.....	3.11	2.80	3.56	2.95
Aug.....	3.10	2.79	3.55	2.96
Sept.....	3.11	2.82	3.56	2.96
Oct.....	3.11	2.82	3.55	2.96
Nov.....	3.13	2.85	3.56	2.98
Dec.....	3.14	2.86	3.57	3.00

The market for municipal bonds was consistently strong during the year. The outstanding supply was reduced as new financing fell to a very low level, while many States and municipalities paid off debt because of increased wartime tax collections and restrictions on public works programs of all kinds. High personal income taxes made the tax exemption enjoyed by municipal obligations particularly valuable, while the refusal of Congress to consider modification or withdrawal of their tax-exempt status made wealthy investors readier to bid up prices of these bonds.

Trading was very active in the railroad bond section, especially in reorganization obligations. Record earnings, progress on reorganization plans following the issuance of the Supreme Court's decisions in the St. Paul and Western Pacific cases in March, and large back interest payments on a number of defaulted bonds stimulated the rise. Bonds of a number of "borderline" railroads also rose sharply, both on improved earnings which made the threat of default less imminent and on large-scale repurchases by many of the issuers.

The turnover of bonds on the New York Stock Exchange during 1943 aggregated \$3,254,716,525, which compared with \$2,311,479,250 in 1942. The total turnover of U.S. Government securities on the New York Stock Exchange amounted to only \$4,192,025, as compared with \$6,533,850 in 1942. As in prior years, the great bulk of the trading in Government bonds was effected over-the-counter by Government bond dealers.

New Financing. Corporate financing declined to the lowest level in a long period of years. This resulted chiefly from the fact that most of the new plants required for war production were financed by the Defense Plant Corporation, a subsidiary of the Reconstruction Finance Corporation. The DPC and the armed services accounted for more than \$15,000,000,000 of new plant construction for war purposes, whereas all plant investment by industry since the defense program was launched in June, 1940, approximated \$6,000,000,000. New offerings of securities for the account of issuers other than the Federal Government from month to month during the year 1943 are recorded in Table 5 at the top of page 203.

TABLE 5—NEW SECURITY ISSUES
(In million dollars)

Month	Total	New Capital	Refunding
January.....	176	7	170
February.....	102	58	44
March.....	200	90	110
April.....	158	36	122
May.....	157	44	114
June.....	203	41	162
July.....	169	31	139
August.....	145	29	116
September.....	109	20	89
October.....	201	57	144
November.....	357	165	192
December.....	163	33	130

New financing other than that of the Federal Government in 1943 compared with earlier years as shown in Table 6.

The U.S. Treasury borrowed a total of \$57,637,-000,000 during 1943, increasing its total debt to \$170,108,000,000. It obtained \$12,313,000,000 of this sum through net sales of nonmarketable war

TABLE 6—SUMMARY OF NEW FINANCING
(In millions of dollars)

Year	Total (New and refunding)	Total new capital	Total domestic	New capital State and municipal	Federal agencies	Corporate Bonds & notes	Stocks	Foreign	Total refunding
1933.....	1,063	720	708	483	64	40	120	12	343
1934.....	2,160	1,386	1,386	803	405	144	35	..	774
1935.....	4,699	1,457	1,409	855	150	334	69	43	3,242
1936.....	6,214	1,972	1,949	735	22	839	352	28	4,242
1937.....	3,937	2,138	2,094	712	157	817	408	44	1,799
1938.....	4,449	2,360	2,325	971	481	807	67	35	2,089
1939.....	5,842	2,289	2,239	931	924	287	97	50	3,553
1940.....	4,803	1,951	1,948	751	461	601	135	2	2,852
1941.....	5,546	2,854	2,852	518	1,272	889	173	1	2,693
1942.....	2,119	1,075	1,075	342	108	506	118	..	1,044
1943.....	2,228	643	643	176	90	286	92	..	1,585

savings bonds, and \$18,948,000,000 through sales of marketable bonds. Another \$12,309,000,000 was raised through sales of certificates of indebtedness maturing within one year, which proved attractive both to banks and corporations, and \$6,-445,000,000 was obtained through the sale of Treasury bills to banks. The Treasury raised \$1,-312,000,000 by sales of notes, and \$2,202,000,000 from tax anticipation notes. A total of \$3,671,000,-000 was obtained from the sale of special issues, chiefly to the Social Security funds.

The Nation's Savings. Money savings by individuals, consisting of the excess of individual incomes over expenditures on consumer goods and services and personal income taxes, registered only a small increase over 1942. While national income payments increased considerably (see BUSINESS REVIEW), this was offset by higher taxes and larger outlays for consumer goods and services. Estimates of the SEC of liquid savings for the first three quarters of 1943, and for preceding years, were as follows:

TABLE 7—LIQUID SAVINGS OF INDIVIDUALS
(Billions of dollars)

Type	1940	1941	1942	First Quarter	1943 Second Quarter	Third Quarter
Currency and bank deposits.....	+3.0	+5.0	+11.5	+3.8	+3.0	+2.7
Savings and loan associations.....	+0.2	+0.4	+0.3	+0.1	+0.2	+0.1
Insurance and pension reserves						
Private insurance.....	+1.7	+2.1	+2.4	+0.8	+0.8	+0.7
Government insurance.....	+1.2	+1.8	+2.4	+0.8	+1.1	+1.0
Total.....	+2.9	+3.8	+4.9	+1.7	+1.8	+1.7
Securities						
U.S. Savings Bonds.....	+0.9	+2.8	+8.0	+2.6	+3.0	+3.4
Other U.S. Government.....	-0.4	-0.8	+1.9	0.0	+1.2	+2.1
State and local government.....	-0.1	-0.2	-0.1	0.0	0.0	+0.1
Corporate and other.....	-0.5	-0.5	-0.3	0.0	-0.2	-0.3
Total.....	-0.1	+2.9	+10.1	+2.6	+4.0	+5.2
Liquidation of debt, not elsewhere classified.....	-1.1	-0.6	+2.8	+0.7	+0.2	+0.2

The extent to which individual savings have increased as a result of wartime economic conditions may be seen from the following table:

TABLE 8—DISPOSITION OF INCOME PAYMENTS
(Billions of dollars)

	1939	1940	1941	1942	1943
Income payments to individuals.....	70.8	76.5	92.2	115.5	141.9
Less: Personal taxes and nontax payments.....	3.1	3.5	4.0	6.6	17.8
Federal.....	1.3	1.4	2.0	4.7	15.8
State and local.....	1.9	1.9	1.9	1.9	2.0
Equals: Disposable income of individuals.....	67.7	73.2	88.2	108.8	124.1
Less: Consumer expenditures.....	61.7	65.7	74.6	82.0	90.5
Equals: Net savings of individuals.....	6.0	7.5	13.7	26.9	33.6

Source: U.S. Department of Commerce.

Financial Regulation. Because of preoccupation with the war effort, the Securities and Exchange Commission was relatively inactive during the year. The

agency refrained from advancing additional reform proposals, and concentrated largely upon hastening integration and simplification proceedings against public utility holding companies. Hearings were begun late in the year before the Commission on an extended inquiry into price restrictions contained in security syndicate agreements among dealers offering new issues of securities. These had not been completed by the end of the year. See LAW under *Supervision of Federal Agencies*.

International Finance. Because of the operation of Lend-Lease (q.v.) which enabled countries associated with the United States in the war effort to obtain huge quantities of war materials and supplies they required without cash payment, there was little need for international lending. The Treasury reported a net inflow of \$936,000,000 in its report on international capital movements, of which \$810,000,000 consisted of short-term banking funds. Wartime transactions with Latin America and neutral European countries provided them with a surplus of dollars, part of which was con-

verted into gold and part kept on deposit in this country. Repatriation of their dollar bonds by some foreign countries resulted in a net reduction of \$81,000,000 in foreign securities outstanding in this country during the first nine months of 1943, and foreigners purchased \$34,000,000 of domestic securities on balance during the period.

The U.S. Treasury inaugurated a census of holdings of foreign assets by Americans, to supplement the census of foreign holdings of American assets obtained by Form TFR 300. This new census required all residents of this country to report their holdings of securities and other property abroad on Form TFR 500. The Treasury was not explicit as to its purpose in ordering this census, which evoked a number of protests on the ground that elaborate reports were required even from holders of very small blocks of foreign obligations.

Active discussion of plans for currency stabilization and international lending after the war centered attention upon the problem of blocked balances held by the British Empire and Latin American countries in London, which resulted from Britain's very unfavorable balance of trade under wartime conditions. By the end of the year, it was estimated that India had accumulated upwards of £600,000,000 in London, and that total foreign balances amounted to well over £1,000,000,000 and were increasing at the rate of £300,000,000 a year. It was recognized that the existence of these frozen balances would seriously hamper the possibility of stabilizing sterling after the war, unless special measures were taken to handle them. The White Plan for international currency stabilization provided for the gradual unfreezing of these balances by the proposed International Stabilization Fund. American bankers suggested as an alternative a large postwar credit to London to assure stabilization of the pound-dollar rate. The U.S. Treasury also proposed the establishment of a United Nations Bank for Reconstruction and Development, with an authorized capital of \$10,000,000,000, to carry on postwar lending which could not be effected through ordinary private channels, to assure extensive international lending in the postwar period. See POSTWAR PLANNING.

JULES I. BOGEN.

FINE ARTS. See ART; LITERATURE; MUSIC; THEATER; articles on academies. For **Section of Fine Arts**, see ART; PUBLIC BUILDINGS ADMINISTRATION.
FINGERPRINTS. See FEDERAL BUREAU OF INVESTIGATION.

FINLAND. A republic of Northern Europe. Capital, Helsinki.

Area and Population. Finland had an area of 134,253 square miles following the cession of 13,558 square miles of territory to Russia by the Soviet-Finnish peace treaty of Mar. 12, 1940. The entire ceded territory was reoccupied by Finnish and German troops in 1941 after Finland joined Germany in its war with Russia, and on Nov. 29, 1941, the Finnish parliament voted to annul the peace treaty and reincorporate the ceded regions in the national territory. Estimated population of the prewar area on Jan. 1, 1943, was 3,887,217 (3,667,067 at the 1930 census). Living births in 1941 averaged 24.2 per 1,000 inhabitants (17.9 in 1940); deaths, 20.0 per 1,000 in 1940 (14.8 in 1939). About 90 per cent of the inhabitants speak Finnish and most of the remainder Swedish. Estimated populations of the chief cities on Jan. 1, 1940, were: Helsinki (Helsingfors),

304,965; Tampere (Tammerfors), 76,730; Turku (Åbo), 74,351; Viipuri (Viborg), 74,247; Vaasa (Vasa), 32,695; Oulu (Uleaborg), 28,021; Lahti, 26,864; Kuopio, 24,836. Swedish place names are given above in parentheses.

Education and Religion. School attendance in 1938-39 was: Elementary, 403,403; secondary, 50,580; university and schools for higher education, 8,752; vocational and technical, 20,583. Less than 1 per cent of the adult population was illiterate in 1930. War damage to educational institutions in 1939-40 was estimated at 333,000,000 marks. The Technical University of Helsinki, where damage totaled 20,000,000 marks, was repaired and reopened by Oct. 1, 1940. The population on Jan. 1, 1938, included 3,680,237 Lutherans, 70,887 Greek Catholics, 9,840 Baptists and other Evangelical church members, 1,551 Roman Catholics, 1,755 Jews, and 360 Moslems.

Production. In 1930 60 per cent of the working population was engaged in agriculture and 16.8 per cent in industry, but Finland produced only about four-fifths of its agricultural requirements in the period before 1939. The two wars with Russia in 1939-40 and 1941-44 placed a great strain upon the Finnish economic system. The 1942 grain harvest of 425,000 metric tons was about 70 per cent of normal. The yield of sugar beets was 132,000,000 lb., or 50 per cent more than in 1941; of potatoes, 2,136,200,000 lb. (1,744,600,000 in 1941). The livestock census of March, 1942, showed 273,838 horses, 1,487,663 cattle, 352,016 sheep, 236,566 swine. The output of sawn timber in 1942 was 500,000 standards (of 1,980 bd. ft.), compared with 450,000 standards in 1941 and a normal production of about 1,200,000 standards. The 1941 production of plywood was 1,059,399 cubic ft.; chemical wood pulp, 590,000 tons; mechanical wood pulp, 20,000 tons; newsprint, about 50,000 tons; other paper, about 190,000 tons. Manufacturing is confined mainly to the processing of agricultural and forest products.

Foreign Trade. Merchandise imports in 1942, including bullion but excluding war materials, totaled 11,736,000,000 Finnish marks (10,200,000,000 in 1941); exports, 5,988,000,000 (4,320,000,000 in 1941). For the composition and distribution of the 1941 trade, see 1943 YEAR BOOK.

Finance. Ordinary budget estimates for 1943 balanced at 18.3 billion marks, as against prewar budgets of around 5 billions. War expenditures for 1940-42 were reported to total 44 billion marks and were estimated at 19 billions for 1943. Actual tax revenues rose from 3.8 billions in 1940 to 13 billions in 1942. Actual expenditures in 1942 were about 27 billion marks (19 billions for war).

The public debt on Dec. 31, 1942, totaled 40 billion marks, an increase of 9.5 billions during 1942; total loans from the Bank of Finland, 14.6 billions; clearing balance owed by Finland, 3 billions; notes in circulation, 9.6 billions (2 billions on Dec. 31, 1937). The average exchange rate of the mark, problematical because of rapid inflation in 1942-43, was \$0.0187 in 1940 and \$0.0201 for January-June, 1941.

Transportation. The railways, mostly state-owned, extended 5,107 miles in 1939. The highway network covered 39,826 miles in 1940. Air lines connected Helsinki with Stockholm and the German European air network. Ships entering Finnish ports numbered 6,985 in 1939, 2,589 in 1940, and 2,320 in 1941. As of Dec. 31, 1941, Finland had a merchant fleet of 494 vessels aggregating 543,000 gross tons; this represented a loss of 42 per cent of the prewar merchant marine due to the war.

Government. The Constitution of July 17, 1919, vested executive power in a President elected for six years by 300 electors, chosen in the same manner as members of the Diet. Legislative power rests with the unicameral Diet and the President. The 200 members of the Diet are elected by direct vote of all citizens, male and female, 24 years or more of age. The cabinet is appointed by the President but is responsible to the Diet. President, Risto Ryti (National Progressive), who became Acting President on Nov. 28, 1940, and was elected Dec. 19, 1940, for the term ending Mar. 1, 1943. The standing of the parties in the Diet elected July, 1939, was: Social Democrats, 85; Agrarians, 56; National Coalition, 25; Swedish People's party, 18; Patriotic National Movement (pro-Fascist), 8; National Progressives, 6; Small Farmers, 2. The parliamentary elections scheduled for 1942 were postponed to 1944. A government of national union, representing a coalition of the six principal parties, was formed Dec. 1, 1939, upon the outbreak of the Russo-Finnish war. It continued in office through 1943. Premier at the beginning of 1943, Johan Wilhelm Rangell, who assumed office Jan. 4, 1941.

Finland entered into a state of war with the Union of Soviet Socialist Republics on June 26, 1941, without a formal declaration. It adhered to the Anti-Comintern Pact for five years on Nov. 25, 1941, but did not sign the Three Power Pact—the Axis military alliance. The British, Canadian, and New Zealand Governments declared a state of war with Finland as from Dec. 7, 1941; Australia and the Union of South Africa, as from December 8; the Government of Czechoslovakia, as from Dec. 16, 1941. For developments in 1943, see *History* below.

HISTORY

Finland's Dilemma. The dilemma in which Finland found itself in 1942 as a result of the failure of the German attack upon Russia (see 1943 *YEAR BOOK*, p. 244) became progressively worse during 1943. Popular pressure upon the Finnish Government for withdrawal from the war increased in direct ratio to the steadily declining military fortunes of Germany.

The grim prospect of impending defeat reversed the dictatorial, pro-Nazi trend noted in some governmental and conservative circles in 1942. There was a relaxation of the censorship and police restrictions that had prevented free discussion of Finland's future course. In response to the growing public demand, the Government made repeated efforts to withdraw from the war. But it was balked by German threats of retaliation and by the Soviet Government's uncompromising attitude, considered equivalent to a demand for unconditional surrender. Except for the Finnish Communists in exile in Russia, all parties and classes supported the Government in its refusal to consider the latter alternative.

Throughout 1943, Finnish internal politics and foreign policies revolved about the incessant search for a way out of the dilemma. Six to nine German divisions were stationed in Northern Finland. The country was dependent upon German-controlled Europe for 90 per cent of its trade and for 40 per cent of its breadstuffs. The Finns could not withdraw from the war without provoking German military occupation, a food blockade, or both. Nor could they entrust their fate to the mercy of the Soviet Government without imperiling their national independence, their democratic political institutions, and their free economic sys-

tem (consult *YEAR BOOKS* for 1939 and 1940).

As insurance against the danger from both Germany and Russia, the Finns late in January were reported to have opened negotiations for an alliance with Sweden. At the same time the Finnish Government sought to improve its strained relations with the United States and to secure American assistance in negotiating a peace with Russia that would safeguard Finnish independence and territorial integrity. In these largely secret negotiations, the Finnish Government was reported willing to give up the territories in Russian Karelia won with German aid in 1941. But it held out strongly for restoration of the 1939 boundaries, which were altered in Russia's favor by the bloody winter war of 1939-40.

These negotiations dragged on fruitlessly throughout 1943. Meanwhile Finland perforce continued its policy of passive military, political, and moral cooperation with the Axis. Finnish troops were reportedly withdrawn from occupied Soviet territory south of Lake Ladoga early in the year. But elsewhere they remained on the defensive in Russian territory.

Presidential Election. The determination of pro-democratic forces in Finland to prevent a diplomatic rupture with the United States played a leading part in internal political developments. Early in the year the powerful Social Democratic party and elements in the Swedish People's party launched a vigorous attack upon Minister of Foreign Affairs R. J. Witting, whose pro-German policies were held responsible for the severance of American-Finnish consular relations late in 1942. President Ryti was notified that he could not expect reelection if he retained Witting in the Cabinet. At the closing session of the Diet on January 26, President Ryti devoted one-third of his speech to a discussion of Finnish-American relations. He expressed hope that the traditionally friendly understanding would be restored.

When the 1943 session of the Diet convened on February 2, the successful Russian winter offensive against the Germans was in full swing. Addressing the session, Ryti for the first time made an open bid for the assistance of the western democracies in saving Finland from the consequences of a German defeat.

This policy apparently regained for the President the wavering support of the Social Democrats and Swedish People's party. After Field Marshal Baron Karl Gustav Mannerheim, commander in chief of the Finnish armies, had refused to accept the nomination offered by the strong Agrarian party, Ryti was reelected for a two-year term beginning March 1 in an election held February 15. Since no popular elections had been held since the outbreak of war, the decision rested with the 300 Presidential electors chosen in 1937. Ryti received 269 votes on the first ballot; 24 votes were blank, and 7 were cast for noncandidates.

There had been little pre-election campaigning, as the Government discouraged political discussion. However the Council of the Social Democratic party, on the eve of the election, issued an important manifesto urging the removal of hindrances to friendlier relations with the United States. The statement also declared that Finland's war with Russia was separate from the war as a whole and that the republic reserved the right to withdraw from hostilities "when the right moment strikes and her liberty and independence are secured."

New Cabinet Formed. In accordance with tradition, Premier Rangell and his entire Cabinet re-

signed on February 16 to permit President Ryti to reorganize the Government. The Finnish Ministers to Germany and the Vatican were called home for consultation in connection with this reorganization. The day after his inauguration on March 1 for a second term, President Ryti called on Vaino Hakkila, speaker of the Diet and leader of the right wing of the Social Democrats, to form a new Cabinet. Known for his pro-American and democratic sympathies, Hakkila selected Sir Henrik Ramsay, a man of similar views, for the key post of Foreign Minister. However he was unable to win the support of the Agrarians, second largest party in the Diet. (In a manifesto issued February 28, the Agrarians had demanded effective prosecution of the war "to a finish" and a foreign policy designed "to secure fully our national independence and future defensive possibilities." They also were at odds with the Social Democrats over domestic economic issues.)

President Ryti then selected Prof. Edwin Linkomies, vice chairman of the conservative National Coalition party, as a compromise Premier on whom both the Social Democrats and Agrarians could agree. On March 5 Linkomies formed a new coalition government including representatives of all of the political parties except the pro-Fascist Lappo, which disapproved of the "tendency" of the other Linkomies appointees. Sir Henrik Ramsay replaced Witting as Foreign Minister, but nine other members of the Rangell Cabinet were retained, including Finance Minister Vaino Tanner, leader of the Social Democrats, and the Minister of Social Affairs, Karl August Fagerholm, who had proffered his resignation the previous December to balk a German demand for Gestapo control of foreign Jews and other anti-Nazi political exiles in Finland. Gen. Karl Rudolf Walden, Mannerheim's right-hand man, retained the Defense portfolio.

Peace Initiatives. The composition of the Cabinet and the circumstances under which it was formed indicated a desire to proceed more actively with peace negotiations. The Germans and their Finnish supporters countered this by increasing pressure for more active Finnish military assistance. In April the U.S. State Department informally and confidentially offered to use its good offices in promoting peace between Finland and Russia. Foreign Minister Ramsay was then sent to Berlin by the Linkomies Government in an apparent effort to win German consent to such negotiations. The German Foreign Minister, however, reportedly threatened to make a separate peace with Russia at Finland's expense if the Finns allowed themselves to be seduced by Washington.

The Finnish Government accordingly sent an evasive reply to the State Department. Provoked by these events, the U.S. Government late in April reduced its legation staff at Helsinki to a single official. Severance of Finnish-American diplomatic relations seemed imminent. In mid-May Premier Linkomies announced that prospects for peace with Russia were uncertain, but that Finland would never permit a foreign power to destroy its national existence and independence.

The continued German retirement in Russia, the collapse of Italy, and the barring of further German troop movements across Sweden was followed early in August by new Finnish initiatives for a separate peace with Russia. These moves were believed to be inspired by growing public pressure. On August 20 a manifesto signed by 50 leading Finns from the major political parties urged President Ryti to facilitate an examination of pos-

sibilities for peace by naming ex-Premier J. K. Paasikivi to the Premiership in place of Professor Linkomies. On September 3 the Diet had a full-dress debate on foreign policy for the first time in almost two years, at which Premier Linkomies reportedly satisfied his critics.

In an interview with Finnish and foreign correspondents on September 12, Linkomies openly declared that Finland desired peace with Russia on the basis of her pre-1939 independence and territorial status, but would never accept unconditional surrender. He said that Finland regretted being at war with Britain, wanted more intimate relations with the United States, and was enthusiastically in favor of a "Nordic union," or an alliance of the Scandinavian states.

This peace talk gradually died down, without reaching the stage of direct negotiations, in the face of Moscow's persistent refusal to state its terms. There was strong sentiment in Finland for the evacuation of Finnish-occupied districts of Soviet Karelia preliminary to a direct approach to Russia. However the Finnish General Staff rejected this proposal, holding that the Finnish positions in Russia offered the only guarantee against future Soviet aggression. Meanwhile an undeclared armistice was reported in effect along the whole Finnish sector of the Russian front.

Anti-German Trend. As Finland gradually moved toward a more independent foreign policy, there were signs of growing distrust and noncooperation between the Germans and Finns. A battalion of Finns who volunteered in 1941 for service with the Germans against Russia returned to Finland in June upon the expiration of their contract. The Finnish Government disbanded the unit on July 11, refusing to permit any of its personnel to rejoin the Germans. Upon the resignation of Mussolini in Italy, Finland refused to recognize Mussolini's "Fascist republican" regime despite German protests. Sections of the Finnish press denounced German persecution of the Jews in Denmark and the subsequent Nazi round-up of Norwegian students. Estonians fleeing their German-controlled country were received with sympathy in Finland. With the relaxation of the censorship, Finnish newspapers featured news of German defeats.

In mid-November there were reports that the Germans were planning a pro-Nazi coup d'état in Finland in conjunction with Finnish Nazis and some general officers in command of the Finnish home front. Minister of Social Affairs Fagerholm resigned December 11 under renewed German pressure and was succeeded by A. Aaltonen, secretary of the Social Democratic party. In mid-December Stockholm reports told of rioting in Helsinki among Finnish troops ordered to return to the front. New peace appeals to Russia were made by the Finnish radio on December 15, but Premier Linkomies announced at the year's end that the end of the war was "completely hidden to us."

Other Developments. Finnish anxiety to keep on good terms with the United States was reflected in the formation in July of a Finnish-American organization for the promotion of closer relations and in the Government's efforts to maintain its exceptional record of payment on obligations due the U.S. Treasury. On May 1 Finland paid interest of \$473,474 on the \$24,000,000 Export-Import Bank loan advanced during the Finnish-Russian war of 1939-40. Interest payments on Finland's war debt was resumed on June 15, and on October 14 the Finnish Minister in Washington signed an agreement under which Finland undertook to pay

in 20 annual installments the \$845,287 payable on the war debt during the period Jan. 1, 1941, to Dec. 31, 1942, but postponed by the joint Congressional resolution of June 12, 1941.

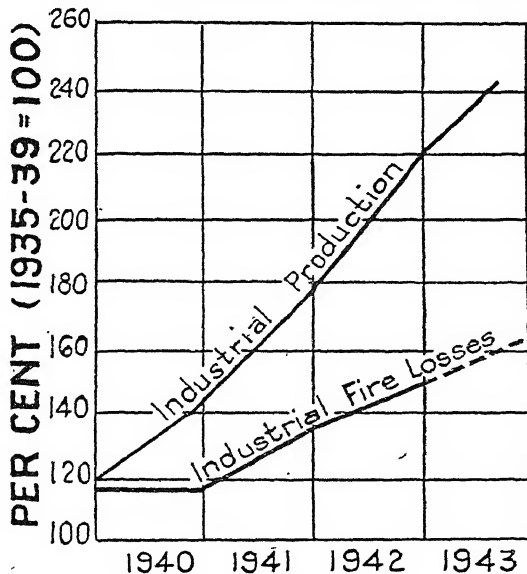
The acute food shortage was relieved to a marked degree during 1943 as a result of the mild winter and larger crops. Conscription of women was resorted to during the spring and summer to obtain sufficient labor for agriculture. Agriculture was also assisted by subsidy payments, an issue which provoked a parliamentary crisis between the Agrarian and Social Democratic deputies in June. Rapid inflation of the currency continued (see *Finance*). The exhaustion of tax resources led the Cabinet to introduce legislation for another compulsory loan on June 21. A Swedish-Finnish trade agreement, under which Sweden undertook to export goods to the value of 12,500,000 Swedish crowns to Finland during the first half of 1944 and to advance a credit of 5,000,000 crowns, was concluded in December.

See *CHEMISTRY* under *Foreign*; *GERMANY* and *SWEDEN* under *History*; *REFUGEES*; *SOCIALISM*.

FIRE DIRECTOR, Electric. See *PHYSICS*.

FIRE GUARD UNIT. See *CIVILIAN DEFENSE, OFFICE OF*.

FIRE PROTECTION. During the year 1943 losses by fire showed a marked increase. Preliminary estimates by the National Board of Fire Underwriters placed the loss at \$380,235,000, as compared with \$314,295,000 in 1942. This is an increase of approximately 21 per cent over 1942 and is almost 23 per cent greater than the average for the past five years. This increase in losses is largely in the field of industrial fires, which have to a very significant degree caused the destruction of war sup-



plies and productive facilities. A factor of significance in this increase in fire loss was the negative attitude of the War Production Board toward the granting of adequate priorities for fire protection equipment for important industrial and other buildings. As the year ended, a more liberal policy on the part of the WPB tended to improve fire safety conditions by making necessary fire protection equipment more readily available to industrial plants.

Some increase in industrial fire losses is anticipated during periods of accelerated production and higher values and it is probably fair to say that some comfort may be taken from the fact that fire losses are not mounting as rapidly as industrial production. This fact is illustrated by the graph in the preceding column.

During 1943 there were no fires of the magnitude of the S.S. *Normandie* or Coconut Grove night club fires of 1942, or of the Firestone Rubber fire at Fall River, Mass., in 1941. There were however many more fires in the United States and Canada involving losses of a quarter million dollars or more. According to the National Fire Protection Association there were 105 such fires as compared with 80 fires of similar magnitude in 1942, and an average of about 47 in the previous 5 years.

A favorable development of 1943 which will have a long-time benefit was the increase in the number of industrial fire brigades which have been trained and equipped. This development was encouraged by inspectors of the War and Navy Departments, the Office of Civilian Defense, and similar agencies. The first complete manual on the organization and training of industrial fire brigades was published early in the year by the National Fire Protection Association.

Continued decline in the manpower of municipal fire departments brought dire predictions of still more serious fire losses from fire protection authorities. A national survey of paid fire departments in cities over 20,000 population conducted by the National Fire Protection Association revealed that the nation's fire departments have already lost one out of eight of their experienced men to the armed forces. Many of the country's fire chiefs have expressed the fear that further drafting of married firemen of military age may have a disastrous effect on the ability of fire departments to cope with major conflagrations. Inadequate manpower in the municipal fire service was undoubtedly a factor in the increase of large fires during the year. It is likely that during the coming year, municipal fire officials will be faced with the necessity of taking drastic steps to keep the fire departments' strength up to a reasonable minimum. While many local selective service boards were sympathetic to the importance of firemen, many others, faced with continued demands upon the available manpower, did not protect the fire department to an adequate degree.

The average age of fire fighters in many departments has risen to an alarming degree. In a number of cities the age restrictions have been removed and it seems probable that pension costs in many communities may become a serious postwar problem.

The ranks of auxiliary firemen enrolled under the civilian defense program were becoming greatly reduced in many areas because of loss of interest as the danger of enemy air attack diminished. Fire departments generally were faced with heavy additional responsibilities with ever decreasing manpower. See *CIVILIAN DEFENSE, OFFICE OF*.

The demands of the Army and Navy and other Federal agencies for motor fire apparatus continued to absorb the greater part of all fire apparatus production. Late in the year there was evidence that these needs were being met and that apparatus might soon again be available to municipal fire departments at least in limited quantities.

Because of the war, general interest in fire protection and prevention grew rapidly and a greatly increased demand for fire protection standards was

created. The National Fire Protection Association published early in 1943 the National Fire Codes for Extinguishing and Alarm Equipment embracing a compilation of 42 standards in that field and the National Fire Codes for Prevention of Dust Explosions covering 14 standards. In the fall of 1943 the National Fire Codes for Flammable Liquids, Gases, Chemicals, and Explosives was issued embracing 44 standards, and publication of a volume entitled National Fire Codes for Building Construction is planned for 1944, so that some 150 fire standards will be available in four volumes. Other standards issued during 1943 dealt with (1) the installation, maintenance, and use of piping and appliances for city gas and (2) fire protection in plants producing or handling magnesium powder or dust.

In the field of legislation, it is to be noted that the Cocoanut Grove holocaust in Boston, which occurred in 1942, proved to be a stimulus to public interest and concern about fire dangers. Rightly or wrongly, this concern manifested itself largely in a wave of new legislation designed to safeguard places of public assembly against rapidly spreading fires, inadequate exit facilities, and panic. Carried along on this wave of public feeling were a number of excellent fire prevention ordinances and a general effort on the part of fire officials to tighten the enforcement of fire safety laws already on the statute books.

The Model State Fireworks Law was enacted by Massachusetts and New Hampshire, thus bringing to 17 the total of States having enacted this progressive measure.

In the contest for year-round excellence in fire prevention activity, conducted by the National Fire Waste Council of the United States Chamber of Commerce, Milwaukee, Wis., was awarded top honors for activity during 1942. In the 1943 Fire Prevention Week contest conducted by the National Fire Protection Association, Chicago, Ill., emerged as the winner among more than 1,800 cities participating.

An item of growing importance to many municipalities has been the material increase in the number of airplane crash fires and the difficult problem involved in setting up any procedures to effectively control this type of fire. Just as the year drew to a close, plans were completed for a conference sponsored jointly by the Army Air Forces and the National Fire Protection Association, to be held early in 1944 to discuss this problem.

As in other fields, those concerned with fire protection are giving thought to postwar plans. Following the war there will be many serious fire protection problems to be solved. Municipal fire departments must be brought back to normal strength once more and standards for fire protection equipment must be promptly restored. The intelligent distribution and use of the thousands of pieces of fire apparatus built for various Federal agencies is a problem of major importance.

Students of building construction and city planning agree that if the United States had been subjected to the type of fire attack that Britain and Germany have been subjected to, much more appalling damage and destruction would have been inevitable. The gradual rebuilding of American cities to make them immune to the dangers of conflagrations and sweeping fires is a long-range problem of the utmost importance to the future welfare of this country. Only by long-range planning and reconstruction of our cities in times of peace can we have any assurance of maintaining the existence of these cities in any future war.

See CIVILIAN DEFENSE; INSURANCE. Also, for flame-proofing, ANTIMONY.

CHARLES SUMNER MORGAN.

FIRST AID. See RED CROSS.

FISCAL SERVICE. A division of the U.S. Department of the Treasury which consists of the following: Office of the Fiscal Assistant Secretary (vacant); Bureau of Accounts (Edward F. Bartelt, Commissioner); Bureau of the Public Debt (William S. Broughton, Commissioner); Office of the Treasurer of the United States (William A. Julian, Treasurer).

FISH AND WILDLIFE SERVICE. In the fiscal year ending June 30, 1943, the Fish and Wildlife Service, so far as possible, devoted its energies to furtherance of the war effort. A conservation bureau that in peace seems to have little if any relation to military affairs, the Service has been surprisingly involved in World War II. Its largest wildlife refuge, the Aleutian Chain, has been the scene of hostilities at Dutch Harbor, Kiska, and Attu. The native populations and administrative staffs of the famed seal islands of St. George and St. Paul were evacuated, the Army taking over. Thus, the seal harvest, ordinarily a large and highly valuable one, was reduced to almost nothing. Returns from sales this year of skins previously collected exceeded \$1,500,000.

Sites aggregating more than 1¼ million acres were allotted in 35 national wildlife refuges within the United States for Army and Navy training of practically all types. Direct aid was provided also by the transfer of 11 of the larger vessels of the Service's fleet to the Navy, Coast Guard, and Marine Corps. The law enforcement officers of the organization cooperated with Army and Navy intelligence units and with the Federal Bureau of Investigation in collecting evidence of subversive activities. More than half of the Service's qualified personnel was employed in cooperation with war agencies in the appraisal and acquisition of lands needed for war purposes.

Assistance to the war effort was rendered also by controlling rodents on military reservations for the protection of stores of subsistence and clothing, for the safeguarding of airplane landing fields made hazardous by the animals' burrows and soil mounds, and for eliminating rodents menacing the health of troops as disease carriers. The potential economic productiveness of suitable lands on wildlife refuges was taken advantage of to increase lumber yield and fiber, grain, and cattle crops. An increased take of fur was of benefit also in providing material for special clothing for the use of the armed forces in frigid climates.

Cooperative predator and rodent control contributed substantially to the war food program of the nation through reducing the numbers of coyotes and other animals preying upon livestock and of ground squirrels and other rodents destructive to field crops and stored products. In a few cases bird control also contributed to the saving of valuable crops. Methods were improved and success was achieved in finding substitutes for materials that had become scarce or unavailable on account of the war.

Through its activities in connection with fishery industries, the Service was able to contribute materially to maintenance of the vital protein food supply of the nation. This was accomplished by developing new fisheries both at home and in Latin America and in the Southwest Pacific, by encouraging the utilization of hitherto more or less neglected fish and shellfish, and by improving packing

methods. To save materials needed in the war, substitutes were developed for metal containers and for the fibers most used for cables and nets.

Every educational medium was employed to encourage the use of fishery products for food, including recommendations as to their cooking. The same service was rendered in connection with domestic rabbits, the production and use of which were greatly increased.

The conservation activities of the Fish and Wildlife Service were carried on to the full extent permitted by conditions. The national wildlife refuge system was kept intact and under adequate administration and was slightly increased in scope. Federal aid in wildlife restoration continued to the extent possible under limitation of both State and Federal funds. Cooperation in the farm pond fish production program was extended under this and other parts of the Bureau's program and was rendered also in the development of wildlife management on soil conservation districts. Forty-six States and Alaska, Puerto Rico, and the Virgin Islands participated in the program.

Conservation law enforcement activities were continued and the men engaged in them cooperated not only in investigation of offenders against the defense of the nation, as previously mentioned, but also in armed patrol of the vast territory of Alaska.

Research for the most part was upon only a maintenance basis but its results, present and accumulated, were never more required for safe guidance of the regulatory and management activities of the organization. Through a program that has owed much of its success to research, implemented, however, by the national refuge system and conservation law enforcement, the migratory waterfowl have in ten years been restored from a state of precariousness to that of a thriving, growing population, estimated to include about 150,000,000 birds. This is not only a great achievement in conservation but also adds materially to the food resources of the nation. A very large number of excellent table birds can be harvested annually from this great flock without impairing the status of the breeding stock. The history of this resource exemplifies what the Fish and Wildlife Service aims at for all game species, namely utilization to an extent compatible with sure preservation of stock sufficient to occupy all of the available breeding range the continent affords.

IRA N. GABRIELSON.

FLAG SALUTE CASE. See *LAW* under *Decisions Concerning Personal Liberties*.

FLAME THROWERS. See *BOMBS*.

FLAXSEED. Flaxseed production in the United States for 1943 was estimated by the U.S. Department of Agriculture to total 52,008,000 bu. from 5,867,000 acres as compared with 41,053,000 bu. from 4,424,000 acres in 1942, nearly three and one-half times as large as the 1932-41 average production of 14,226,000 bu. The average yield per acre of 8.9 bu. was higher than the 10-year period of 7.3 bu., but below the yield of 9.3 bu. for 1942. The

seasonable average price per bushel received by farmers was estimated at \$2.84 and the value of production at \$147,507,000 in 1943, compared to \$2.36 and \$96,731,000 in 1942. The accompanying table lists the States leading in the production of flaxseed for 1943.

FLIGHT STRIPS. See *ROADS*; *STATE LEGISLATION* under *Aviation, Highways, and Motor Vehicles*.

FLOOD CONTROL. While a number of projects for control of flood waters and protection from floods have been halted or deferred on account of war conditions and emergencies, a committee of the American Society of Civil Engineers has called attention to the importance of this line of civil engineering as affecting public welfare and protection. A line of study preliminary to the design of control works is in the estimating or prediction of flood intensities and flood frequencies in specific areas of the country. Flood hazards have been increased by certain trends towards heavier floods and higher flood levels. There is also a dangerous tendency to continual encroachment upon flood channels and flood plains by private and public works, and unless this is checked by enforcement of zoning laws the above committee considers that there will be little reduction of flood damage in future.

The advisability of clearing flood zones of public and residential buildings and industrial plants is suggested. In view of the heavy annual costs for maintenance and operation of protective works, the creation of new flood hazards should be checked, in order to reduce future demands for protection. The above report states that the public has a false sense of security based upon the number of works built and projected.

Early in 1943, widespread floods throughout the United States and Canada tested the effectiveness of protective works. Those along the Ohio River proved satisfactory in easing conditions, where gates excluded flood waters and pumps handled internal drainage waters. At Huntington, W. Va., a pumping station with three propeller pumps was put in service to handle the internal drainage from a large area when the normal outlet to the Ohio River was closed on account of floods. This plant is the final item in a project which includes 5 miles of dikes or levees, 7 miles of concrete river-front wall, and several smaller pumping stations.

In the Tennessee River valley, damage by floods caused by extremely heavy precipitation was minimized through the series of dams and reservoirs of the Tennessee Valley Authority. These were so operated that the crest level of the flood was kept at 6 to 8 ft. below the probable height if such regulation had not been in service. This case emphasizes the importance of systematic regulation in the storage and release of flood waters in reservoirs. To stop recurring serious floods in the French Broad River, in the west part of North Carolina, the TVA is to construct a series of 7 dams and levees at a cost of some \$8,000,000.

Construction work on the Federal program for flood control was started in 1937, and by June 30, 1943, under the direction of the Corps of Engineers, U.S. Army, there had been completed 44 reservoirs and 101 local protective projects, widely dispersed throughout the country. Under war conditions, work has been discontinued on a majority of projects, and in 1943 only three new projects were initiated as having direct value in the prosecution of the war. An act passed in July, 1943, authorized the expenditure of \$10,000,000 for emergency flood-control work necessitated by spring floods,

State	Value	Acres Harvested	Production (bushels)
Minn.....	44,050,000	1,595,000	15,456,000
N.D.....	41,845,000	2,007,000	15,052,000
Calif.....	15,189,000	2,293,000	4,638,000
Mont.....	12,269,000	568,000	4,544,000
Iowa.....	10,795,000	348,000	3,828,000
Kan.....	5,435,000	293,000	2,051,000
Ariz.....	1,549,000	22,000	484,000

mainly in the Mid-West areas. This included repair, strengthening, and restoration of levees and other works. Progress is being made on plans for the completion of suspended projects and the carrying out of projects not yet started, which will be available as a construction backlog in the transition from war activities to normal peacetime economy.

For the vast problem of the Mississippi River, the Lucas bill, in Congress, proposed a general increase in the height of the levees, but this would not solve the problem. The Mississippi Valley Association, at its annual convention, urged appropriations for emergency work and preparation of a national program of flood control. A project for the Missouri River includes dams, reservoirs, levees, a 9-ft. navigation channel, and protective works at Kansas City, Omaha, and Sioux City. Damage to flooded lands along the Arkansas River was repaired by Army troops, including 20 miles of drainage ditches, 10 miles of roads, and the clearing and leveling of large areas covered by flood debris.

A program for the Connecticut River valley, as revised by the Corps of Engineers, U.S. Army, after severe floods in 1936 and 1938, provides for 20 reservoirs on the tributaries of the river, and the construction of levees and other protective works at seven cities. Dams have already formed three of the reservoirs. At Hartford alone there are nearly 8 miles of dikes and flood walls completed, and the Park River, which passes through the city is now carried by a concrete conduit 5,600 ft. long, having two parallel compartments 30 ft. wide and 19½ ft. high. Of three pumping stations planned to handle the surface drainage and storm water within the protected area, two will discharge into the Connecticut River and the third into the conduit.

The Merrimack River is another stream whose control has been studied as a unit, resulting in plans for a series of dams for flood-control reservoirs. One of the dams, on the Pemigewasset River at Franklin, N.H., was completed in October. It is of the earth-fill type, 130 ft. high and 1,700 ft. long, with eight gates for release of the water as required. Following disastrous floods in 1940, plans were made for protection along the French Broad River and the city of Asheville, N.C. As a postwar project, to be carried out by the Tennessee Valley Authority, it provides for seven storage reservoirs and a levee along the river at Asheville.

As protection for an irrigation development in the southern part of England during floods, a pumping plant has been provided to take care of the internal drainage water. Three screw pumps driven by oil engines of 240 horsepower will discharge the water through a tunnel passing under the river to a convenient outlet.—See **AQUEDUCTS; DAMS; FLOODS; TUNNELS; WATER SUPPLY.**

E. E. RUSSELL TRATMAN.

FLOODS. The major flood event of the year was the widespread and record-breaking flood of May 10-24 that embraced the streams in an area of about 200,000 square miles covering seven central States from Oklahoma to Michigan. The most destructive flood in point of view of loss of life occurred August 5 in West Virginia. (See below.) The following is a chronological account.

The temperatures during March were well below normal over most of the country, the exceptions being the Middle Atlantic States, the Pacific coast, and the far Southwest. Subnormal temperatures were most pronounced in Montana. However, in that State, the weather changed abruptly in the last week of the month and unseasonably high

temperatures and chinook effects melted the snow at lower elevations in the Missouri Basin. This snow melt produced the highest discharge of record at Bismarck, N.D., and the highest stages since 1881 were experienced in the Missouri as far downstream as below Omaha, Nebr., in April. The Cannonball, Heart, Knife, and Little Missouri Rivers were running bankful by March 23. On the 26th the water began running into the city of Mandan; about \$600,000 damage occurred. U.S. Highway No. 10 was closed for nearly two weeks and main-line trains could not run west for two days. Damage estimated at \$125,000 occurred on the Cannonball River due to the flooding in Mott, N.D., where about 500 families had to be evacuated. About 500 people in Beulah on the Knife River also had to leave their homes.

The Missouri River was near flood stage from Williston to below Elbowoods beginning March 27 and considerable flooding occurred from the 29th to the 31st in the Williston to Washburn area. The losses were slight. Floods also occurred from Sanish to Washburn on April 1 to April 2 and floods occurred between Bismarck and Washburn from April 1 to April 4, inclusive. More water flowed past Bismarck during this period than in any previous flood on record. About \$150,000 damage occurred along the Missouri River, with the greatest damage between Bismarck and Sanger.

The April, 1943, flood in the extreme upper Mississippi Valley was caused by the rapid melting of a deep snow cover with the ground still frozen from a long, severe winter. Ice gorges formed at some of the bridges and augmented the discharge when the gorges broke, and the older bridges were carried away and demolished. The crest of the flood reached Minneapolis at 1 a.m. Wednesday with a reading of 17.0 feet, or 1 foot above the flood line, and at St. Paul the peak occurred at 1:00 p.m. Wednesday with a reading of 14.5 feet, or 0.5 feet above the flood line. In the Fort Ripley, Clearwater, and Fridley districts near records for high water were established. At Minneapolis the crest of 17.0 feet was the highest since June, 1916.

A rather severe flood also occurred in April in the upper Missouri River Basin, resulting almost entirely from the melting of a heavy snow cover. The principal flood contributor was the Yellowstone River, with substantial contributions from small tributaries in the Dakotas. Between Bismarck and St. Joseph, the flood was comparable to that which occurred in 1881. At Nebraska City, Nebr., the Missouri reached a stage higher than the previous maximum stage of record in 1881. The most serious damage probably was in the vicinity of Omaha, Nebr.

Excessive flooding extended over seven States from Oklahoma northeastward to southern Michigan during May, causing great damage in the extensive agricultural and industrial areas of this region. This may be ranked as the outstanding flood event since the great flood in the Ohio Valley of January-February, 1937. Although direct loss of life was relatively small, property and crop damage was especially disastrous. The floods were caused by unprecedented rains which occurred in most areas, in two general storm periods, May 6 to 11 and May 14 to 20.

The extensive, and in many cases record-breaking, floods covered the following States: eastern Oklahoma, southeastern Kansas, Missouri, Arkansas, Illinois, Indiana, and southern Michigan. The Neosho (Grand), Illinois, Verdigris, Walnut, Cimarron, and Poteau Rivers, and the Arkansas River from Tulsa, Okla., to the mouth, in the Arkansas

Basin; the White River Basin in Arkansas and Missouri; the Osage, Grand, and Gasconade Rivers, and the Missouri River from Jefferson City, Mo., to the mouth, in the Missouri Basin; the Illinois, Kaskaskia, and Meramec Rivers, and the Mississippi River from Grafton, Ill., to New Madrid, Mo., in the upper Mississippi Basin; the entire Wabash River system except the East Fork of the White, and the Maumee River Basin, were the principal rivers affected.

Relatively short-time stage records were exceeded at many places and long-time records were broken at several places. Records which have stood since 1833 were broken in the Arkansas River, the stage at Fort Smith, Ark., reaching a peak of 41.7 feet in the first rise on May 23, against a stage of 38.0 feet in 1833. In the Osage River, the great flood of 1844 was exceeded by about 9 feet at Tusculumbia, Mo., and by about 4 feet at St. Thomas, Mo. At St. Louis, Mo., the Mississippi reached a stage of 38.9 feet on May 24, just 2.5 feet below the maximum stage of 1844.

The flood in the Mississippi during June and July affected only a relatively small area in the vicinity of Cape Girardeau, Mo.; it may reasonably be considered a continuation of the flood of May-June which reached heights that have been exceeded only in 1844.

Frequent heavy rains over the Kansas River Basin beginning on June 5 and continuing until June 16 caused damaging floods in much of the basin. The greatest damage occurred along the main Kansas River with two distinct overflows. The second crested at Topeka, Kans., at 26.75 feet on June 17, the highest since June, 1935. Below Le Compton, Kans., the stages exceeded the flood of 1935. Dykes in the vicinity of Lawrence were broken with much damage to lowlands.

The Republican River overflowed its banks between Scandia, Kans., and the mouth from June 11 to 18. The Big Blue and Solomon Rivers overflowed twice. Heavy rains on June 15-16 caused overflows in the Delaware and Big Stranger Rivers in Kansas, the Little Platte in Missouri, and the Nemaha in Nebraska, and in the Missouri River from Nebraska City, Nebr., downstream. At Kansas City a stage of 29.1 feet was reached on June 18-19, the highest stage since 1908. Below Kansas City, serious dyke breaks occurred and flooded much farmland.

Moderate floods occurred in the Grand River and Flint River Basins in Michigan during June, the first time in 38 years that flood stages have occurred in the Grand River in the month of June. The loss to prospective crops was estimated at about \$1,000,000 in Ionia County.

The most disastrous flash flood in the history of central West Virginia occurred during the night of Aug. 4-5, 1943, causing the deaths of 23 persons and property damage estimated at near \$1,800,000. The damage was confined to an area approximately 48 miles long, extending from just west of Big Island Run to the upper reaches of Salt Lick Creek, with the maximum width about 12 miles.

Thundershowers, mostly of short duration, occurred about dusk on August 4, throughout the Little Kanawha River Basin. However, these showers were locally heavy in the Burnsville-Copen area. They were followed about three hours later by record-breaking rains accompanied by one of the worst, if not the worst, electrical storms of record.

Generally speaking, the southern tributaries of the Little Kanawha River starting with Long Run and ending with the left Fork of Steer Creek were the highest of record, while from Third Run to and

including Yellow Creek, the northern tributaries crested higher than ever before. On the South Fork of the Hughes River, the tributaries from Spruce Creek to Big Island Run were also as high or higher than the previous records.

The damage to the land was tremendous. Practically every hill in the flood area was scarred by one or more slides. Every cove showed excessive washes. The scour and fill in the valleys was great for, in addition to the usual gravel fill, sizeable rocks and some boulders were washed from the hill tops down into the valleys. Instead of the usual gully drainage, observers reported that the run-off was in sheet-form with waves forming in some instances.

The South Fork of the Hughes River ran out rapidly. The body of one of the victims of Big Island Run floated 49 miles in 16 hours. The run-out of the Little Kanawha River at Parkersburg was very swift for the two days (5th and 6th), as the Ohio River was in pool above Parkersburg and the navigation dams below Parkersburg had been lowered in anticipation of this run-off.

RICHMOND T. ZOCH.

FLORIDA. A south Atlantic State. Area: 58,560 sq. mi. Population: 1,897,414 (1940 census); 2,057,009 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Spessard L. Holland (Dem.), inaugurated in January, 1941, for a four-year term; Secretary of State, Robert A. Gray; Attorney General, J. Tom Watson.

See AQUEDUCTS; BRIDGES; ROADS AND STREETS.

FLUORESCENT LIGHTING. See ILLUMINATION.

FOCKE-WULF. See AERONAUTICS under *Axis Types*. **FOOD AGENCIES, U.S.** See AGRICULTURE, U.S. DEPARTMENT OF; WAR FOOD ADMINISTRATION.

FOOD CONFERENCE. See UNITED NATIONS.

FOOD CONSERVATION. See CIVILIAN DEFENSE, OFFICE OF.

FOOD AND DRUG ADMINISTRATION. The impact of war conditions on consumer commodities required intensified efforts in the enforcement of the Food, Drug, and Cosmetic Act to maintain the purity and quality of foods and drugs used by both civilians and members of the armed forces. Of the 1,638 food seizures effected, 1,222 actions involved products that had become filthy or decomposed, usually as a result of inexcusably careless handling and storage. Principal items thus needlessly wasted were cereal and bakery products, butter and cheese, fisheries products, dried fruits, dressed poultry, candy, and shelled nuts. Whenever it was possible, seized food unfit for human consumption was diverted to suitable war use, such as animal feed, waste fat, and fertilizer material.

Rationed foods and staples used to supplement them were kept under continuous surveillance to

prevent debasement which would not only affect the purchasing power of the consumer, but might reduce nutritional values below minimum requirements. With few exceptions, substitute foods are being labeled in a fashion which informs the careful label reader. Among the debased foods seized were salad dressings in which mineral oil had been substituted for edible vegetable oil, coffee "extenders" bearing no resemblance to the flavor and aroma of coffee, undeclared cocoa shells in chocolate products, spices containing from 20 to nearly 50 per cent of starch, "enriched" bread without enriching ingredients, imitation fruit-type beverages masquerading as pure fruit juices, spurious olive oil, nut meats containing pumpkin seeds, and horsemeat from which the dealer had stripped the identifying labels. Low-fat butter led the list of substandard foods seized, with hard, over-mature canned peas second in number.

Attention was given to 2,738 manufacturers of drugs, devices, and vitamin preparations. Unauthorized and perhaps dangerous substitutions for scarce ingredients, and breakdowns of control in manufacturing and packaging by less experienced employees, are two types of possible drug violations resulting from war conditions. Both require constant regulatory surveillance. Increased regulatory attention has been given, also, to the therapeutic claims, directions, and warnings on medicinal preparations with which many persons may attempt self-medication during the shortage of physicians. Seizures of violative drug shipments during the year totaled 287. Items deviating from required standards of potency showed a marked increase over the number of substandard drugs seized in 1942. Under the section of the act providing that no new drug shall be introduced into interstate commerce unless an application has been filed with the Federal Security Administrator establishing that it is safe for use, 148 new-drug applications were permitted to become effective.

Criminal prosecutions based on 1,060 shipments in violation of the Food, Drug, and Cosmetic Act were initiated in 1943 and the courts were requested to enjoin 16 firms from persistent violations. Total fines of more than \$114,000 and 15 jail sentences were imposed on defendants convicted of violations during the year. Eight of the jail sentences were suspended and the remaining seven were actually served or are still being served.

The first Supreme Court decision interpreting a provision of the Food, Drug, and Cosmetic Act of 1938 was handed down in 1943. It clarified and strengthened the powers of the Federal Security Administrator in the promulgation of food standards.

The primary obligation of the Food and Drug Administration to the armed services is to lessen their task of securing wholesome foods and drugs of standard potency. This work has included regular enforcement operations and special examinations at the request of these services. A second type of war work has been the utilization of the equipment and experience of the Administration and the knowledge and skills of its scientists trained in many specialized fields to assist in solving wartime problems.

WALTER G. CAMPBELL.

FOOD INDUSTRY. Food production in the United States in 1943 established a new all-time record. According to government figures, it was 5 per cent higher than the previous record in 1942, and 32 per cent over the 1935-39 prewar average. This indicates an increase in food production during

this war far greater than during World War I. While crops in 1943 were slightly lower than in 1942, livestock exceeded the 1942 figures by a substantial margin, thus accounting for the boost in total food production.

1943 FOOD PRODUCTION AS A PERCENTAGE OF 1942, 1941, AND 1935-39 AVERAGE
[Bureau of Agricultural Economics]

	Per cent of 1935-39 average	Per cent of 1941	Per cent of 1942
Food grains.....	108	82	78
Truck crops.....	115	99	91
Fruits.....	104	92	90
Vegetables *.....	126	126	119
Sugar crops.....	88	91	80
Total food crops.....	113	97	91
Meat animals.....	150	127	113
Poultry.....	153	132	117
Dairy products.....	113	103	99
Total food livestock.....	138	120	110
Total food production.....	132	115	105
Civilian food consumption per capita.....	105	95	97
Total agricultural production..	128	113	102

* Excluding truck crops

Translated into more illustrative figures, these percentage gains represented the following 1943 food production totals: 55,000,000,000 quarts of milk, an increase of 14 per cent over the 1935-39 average; 10,000,000,000 pounds of beef and veal (dressed weight), an increase of 27 per cent; 1,000,000,000 pounds of lamb and mutton (dressed weight), an increase of 13 per cent; 60,000,000,000 eggs (including nonfarm), an increase of 50 per cent; 4,000,000,000 pounds of chicken (dressed weight), an increase of 63 per cent; 13,000,000,000 pounds of pork (dressed weight), an increase of 78 per cent; 3,000,000,000 pounds of lard, an increase of 73 per cent; 3,000,000,000 pounds of peanuts, an increase of 125 per cent. Also see AGRICULTURE.

Military Requirements. Military and lend-lease requirements during 1943 took about one-quarter of our total food supply, leaving about three-quarters for the civilian population. This compared with 14 per cent in 1942 and 6 per cent in 1941. Our armed forces are now consuming monthly 328,000,000 pounds of meat, 34,000,000 dozens of eggs, 28,000,000 pounds of butter, 221,000,000 pounds of potatoes, and large amounts of other food stuffs. It is estimated that the average soldier eats approximately five and a quarter pounds of foods per day as compared with three and three-quarters pounds per day for the average civilian.

Food going to lend-lease required 2 per cent of our food production in 1941, 6 per cent in 1942, and approximately 10 per cent in 1943, the increase being due to increased Russian shortages. Russia in the first six months of 1943 received one-third of all lend-lease shipments. Food sent to Russia is almost all for the use of the Russian Army. In "reverse lend-lease" the United States has received considerable amounts of foods from Australia, New Zealand, and the United Kingdom. Through August of 1943, Australia and New Zealand provided for us 90,000,000 pounds of beef and veal, compared to a total of 99,000,000 pounds under outgoing lend-lease shipments. See LEND-LEASE PROGRAM.

Civilian Supplies. Despite the large war demands, per capita civilian food supplies in 1943 were approximately the same as during the 1935-39 period. Compared with prewar per capita figures, 1943 consumption of pork, eggs, chickens, fluid

milk and cream, lard, margarine, fresh citrus fruit, canned juices, canned vegetables, potatoes, and dry edible beans were larger. On the other hand, per capita consumption of beef and veal, lamb and mutton, fresh, frozen, and canned fish, cheese, butter, fresh and canned fruit, and fresh vegetables were lower than in the prewar period.

According to Department of Agriculture calculations, the 1943 civilian per capita food supply was larger in all of the essential nutrients than in 1935-39 and, with the exception of Vitamin A and ascorbic acid, the vitamin and mineral content of foods consumed in 1943 was at least as high as in 1941 and 1942. The relatively smaller amounts of protein from meat animals were more than offset by record consumption of poultry, eggs, and fluid milk.

CIVILIAN PER CAPITA CONSUMPTION OF MAJOR FOOD COMMODITIES

Commodity	Av. 1935-39	1942	1943
<i>Meats (dressed wt.)</i>.....lb...	126	137	131
<i>Poultry Products</i>			
Eggs.....lb...	37.5	39.5	43.2
Chickens (dressed wt.).....lb...	18.0	21.8	28.4
Turkeys (dressed wt.).....lb...	2.7	3.7	3.5
<i>Dairy Products</i>			
Total milk.....lb...	806.4	844.2	779.9
All cheese.....lb...	5.6	6.3	5.1
Condensed milk.....lb...	16.8	18.3	19.7
Fluid milk & cream.....lb...	342.3	375.5	405.0
<i>Fats and Oils, total</i>.....lb...	48.3	48.8	46.4
Butter, farm & factory.....lb...	16.8	15.7	12.4
Lard.....lb...	11.0	13.5	14.3
Shortening (fat cont.).....lb...	11.9	9.0	9.1
Margarine (fat cont.).....lb...	2.3	2.3	3.3
<i>Fruits, fresh</i>			
Citrus.....lb...	49.1	54.7	57.2
Apples.....lb...	43.1	28.8	22.4
Other (exc. melons).....lb...	59.9	47.9	37.4
<i>Fruits, processed</i>			
Canned fruits.....lb...	15.0	15.1	10.6
Canned juices.....lb...	5.4	6.8	7.4
Frozen.....lb...	.7	1.7	1.4
Dried.....lb...	5.7	3.9	5.1
<i>Vegetables</i>			
Fresh.....lb...	236.2	253.3	229.0
Canned.....lb...	31.2	41.5	33.4
Potatoes.....lb...	131.3	120.3	141.6
Sugar (refined).....lb...	97.0	88.9	79.6
<i>Beverages</i>			
Coffee.....lb...	14.1	13.1	11.5
Tea.....lb...	.7	.5	.5
Cocoa beans.....lb...	4.4	3.9	3.5

Manpower. All phases of the food industry, from production and processing down to distribution, were hard hit by increasing manpower shortages in 1943. To relieve farm labor difficulties, 900,000 workers from villages and cities registered for farm work during May, June, July, and August; 48,500 workers were brought in from Mexico; 4,700 from the Bahamas; and 8,800 from Jamaica. All together 1,750,000 placements on farms were made. Prisoners of war were used to some extent, and where emergencies developed the Army assigned soldiers to harvest crops. Under a special directive issued by the Office of Economic Stabilization, food processors are entitled to price relief to compensate them for the rise in labor costs.

Canning. Insufficient price relief in the face of mounting production costs is held largely responsible for the 1943 reduction in canned food. The 1943 pack was 8 per cent below 1942.

Government requirements from the 1943 pack are now calculated substantially below 1942 requirements, reflecting mainly a large accumulation of stocks in the hands of the armed forces. Some of the Army stocks have already been released for civilian consumption, and both the administration and the food industry are currently trying to develop economically sound procedures

CANNED FOOD SUPPLIES [National Canners Association]

(Basis Std. Cases)	Total 1000 cases	1942 Pack Civilian 1000 cases	Government 1000 cases
Fruits.....	60,773	37,878	22,895
Vegetables.....	229,023	153,181	75,842
Fruit Juices.....	36,613	31,413	5,200
Specialties.....	32,428	31,728	700
Total.....	358,837	254,200	104,637
		<i>Estimated 1943 Pack</i>	
Fruits.....	46,310	24,883	21,427
Vegetables.....	208,881	148,533	60,348
Fruit Juices.....	46,256	33,646	12,610
Specialties.....	29,000	28,200	800
Total.....	330,447	235,262	95,185

for the disposal of large government stocks during the immediate postwar period.

Prices and Subsidies. Food price developments in 1943 were a subject of increasing concern. Despite the fact that the rise in food costs since the start of World War II has been considerably less pronounced than during World War I, the accelerated advance in food prices late in 1942 and early 1943 seriously threatened the whole wage-price structure and led to the issuance of the President's "Hold-the-Line" order in April, 1943. (See UNITED STATES.) Under the Stabilization Act of Oct. 2, 1942, Congress had directed the Government to stabilize the cost of living at the level of Sept. 15, 1942. However, between that date and May 15, 1943, the cost of living rose 6.2 per cent, largely because of an increase in food prices. The most spectacular price gains occurred in fresh fruits and vegetables which rose 58 per cent from September, 1942, to May, 1943, and accounted for over three-fifths of the increase in the entire cost of living during that period.

In order to bring food prices back to the Sept. 15, 1942, level, the Administration suggested the use of price-rollbacks and subsidies. Chief commodities selected for extensive subsidy programs were meat and butter. (Coffee was at first included but dropped later on.) The Reconstruction Finance Corporation (q.v.) undertook to make subsidy payments to processors so that retail costs of these foods might be held down while producers received large enough returns to encourage output.

Toward the end of the year the administration started to put into effect an additional program to reduce retail prices of apples, onions, potatoes, sweet potatoes, peanut butter, lard, and vegetable shortening. A major part of these decreases was to be made possible without the use of subsidies, by means of a reduction in margins. In some instances the Government planned to absorb part of the cost

FOOD PRICE DEVELOPMENTS IN 1943 [U.S. Dept. of Labor]

		Wholesale Food Prices (1926 = 100)	Retail Food Prices (1935-39 = 100)
1942	July.....	99.2	124.6
	August.....	100.8	126.1
	September.....	102.4	126.6
	October.....	103.4	129.6
	November.....	103.5	131.1
	December.....	104.3	132.7
1943	January.....	105.2	133.0
	February.....	105.8	133.6
	March.....	107.4	137.4
	April.....	108.4	140.6
	May.....	110.5	143.0
	June.....	109.6	141.9
	July.....	107.2	139.0
	August.....	105.8	137.2
	September.....	105.0	137.4
	October.....	105.1	138.2
	November.....	105.7	....
	December.....	105.7	....

of transportation, to take direct losses on purchase operations, or to make direct payments.

Under the impact of the intensified subsidy program, the upward movement in food prices both at the wholesale and retail level was brought to a halt, at least temporarily. Price averages showed a moderately declining trend for several months beginning with June. Toward the end of the year this trend once more was reversed, however.

As the year progressed the subsidy issue became one of the hottest political controversies. Strong opposition against the use of subsidy payments developed both in industry and in Congress. President Roosevelt entered this fight by presenting, in a special message to Congress dated Nov. 1, 1943, an outline of the Administration's food program. In this message it was stated that support-price programs in effect for 1943 under the sponsorship of the Commodity Credit Corporation were expected to cost the government \$350,000,000. In addition it was estimated that the Reconstruction Finance Corporation program for reducing the prices of meat and butter would cost an additional \$450,000,000 per year. Price-support programs in effect during 1943 included the following commodities: Hogs, Eggs, Butter, Cheese, Dry skim and evaporated milk, Chickens, Turkeys, Soybeans for oil, Flaxseed for oil, Cottonseed, Peanuts, Dry beans, Dry peas, American-Egyptian and Sea Island cotton, regular Cotton, Corn, Wheat, Tobacco, and Rice, White potatoes, Sweet potatoes, Vegetables for fresh consumption, Canning crops, Canned vegetables, Apples for processing, Apricots for canning, Figs for processing, Dried apricots, Dried peaches, Dried pears, Dried prunes, Dried raisins, Grain sorghums, Hemp, Castorbeans, Wool, Barley, Sugar beets, Gum naval stores, Hay, and Pasture seeds.

Not all of these programs involved losses for the Government, however. Programs under which losses were expected last year, with the estimates of these losses, were as follows:

COST OF PRICE-SUPPORT PROGRAMS

	Period Covered	Estimated Loss
Dry beans.....	1943 crop	\$8,000,000
Potatoes.....	"	20,000,000
Prunes.....	"	7,000,000
Raisins.....	"	7,000,000
Canning vegetables.....	"	30,000,000
Sugar.....	"	50,000,000
Cheddar cheese.....	1943	25,000,000
Fluid milk.....	"	5,000,000
Oilseeds and products.....	" crops	60,000,000
Feed wheat.....	Fiscal year 1944	70,000,000
Dairy feed payments.....	1943	60,000,000
Miscellaneous.....	1943	8,000,000
Total.....		350,000,000

Source: President's Food Message, November 1, 1943.

Chief Administration argument for an intensive price support and subsidy program is that such a program offers the best method of inducing farmers to increase production without raising the price for the consumer. Therefore this program is being pushed as one of the chief points in the Administration's anti-inflation drive. Chief opposition arguments are that reliance on subsidies constitutes only a piecemeal approach to the food pricing problem and leaves the most urgent problem of restoring a balanced food price structure unsolved. At the same time it is being disputed that subsidies would substantially help in curbing inflationary trends as they actually would tend to increase consumers purchasing power. At the close of the year the controversy over subsidies was by no means settled, although immediate prospects

were for another compromise between Administration and Congress.

Rationing and Black Markets. The great difficulty in the 1943 food program was to bring about a fair and equitable distribution of available supplies. Difficulties arose specifically with respect to perishable seasonal foodstuffs and with respect to uneven geographic distribution of supplies. Transportation difficulties intensified the distribution problem. Although more equal geographic distribution and more even distribution throughout the year could have been accomplished by the extension of rationing to some of the important foods which are not now rationed, the Administration made it clear that it does not intend to use this method. Instead it is planned that the Government itself will either purchase or otherwise control certain foods or absorb the transportation costs in order to stretch consumption throughout the year and to insure distribution that is fair to all parts of the country.

The Administration believes that such Government activity will go a long way toward stamping out black markets. The administration of the various food rationing programs greatly improved in 1943 if general public reaction can be used as a yardstick to measure their success. However, the fact remains that black markets continue to exist in nearly all rationed commodities. The latest example of the possible rapid spread of black markets occurred in the liquor field where the growing shortages in domestic and imported whiskeys created acute black market conditions. Black market conditions in meats were greatly improved toward the end of the year when supplies increased seasonally. There is general fear, however, that with the anticipated tightening in supplies during the spring of 1944 the black market problem again will become intensified.

Distribution. Food distribution, both at the wholesale and the retail level, in 1943 was largely concerned with the effect of OPA price ceiling regulations on food distributors' margins. These problems were multiplied following issuance of the "Hold-the-Line" order, which prevented a revision in the food price margin regulations which had been under study for a considerable time. Food price difficulties were one of the chief contributing factors to the pressure which developed against the Office of Price Administration (q.v.) and which finally resulted in a complete reorganization of the price agency.

One of the chief issues responsible for the attacks of industry and Congress against the OPA was the attempt of OPA to introduce mandatory grade labeling for canned foods under the guise of price control. The grade labeling controversy developed into one of the most important industry issues of 1943. It was thrashed out in detail in public hearings before the Boren-Halleck Committee on Brand Names and Newsprint. As a direct result of these hearings, the Taft Amendment to the Emergency Price Control Act of 1941 was passed in July, 1943, which formally prohibited the use of mandatory grade labeling for pricing purposes. As a result, all grade labeling provisions were stricken out of OPA maximum price regulations.

See agricultural topics; **CHEMISTRY** under *Foods*; **LIVING COSTS**; **REFRIGERATION**; **WAR FOOD ADMINISTRATION**. For pure food laws, see **FOOD AND DRUG ADMINISTRATION**. For frozen and dehydrated foods, see **AGRICULTURAL COOPERATION**; **REFRIGERATION**. See also countries under *Production*; **BRAZIL**.

H. E. LUEDICKE.

FOOD LOCKERS. See AGRICULTURAL COOPERATION; REFRIGERATION.

FOOD RATIONING. See PRICE ADMINISTRATION.

FOOD SHORTAGES, INTERNATIONAL FOOD MEASURES. See COMBINED FOOD BOARD; COORDINATOR OF INTER-AMERICAN AFFAIRS; LEAGUE OF NATIONS; LEND-LEASE PROGRAM; RELIEF AND REHABILITATION; UNITED NATIONS; also, BELGIUM, GREECE, ITALY and other occupied countries under *History*.

FOOTBALL. Picture a former Minnesota ace starring for Michigan or a man who started the year with the professional Chicago Bears winning national intercollegiate scoring honors and you might get a vague idea of what the 1943 football season was like. The war has changed many things, but nothing more than the gridiron sport, which rode over many handicaps to enjoy a comparatively robust campaign.

College football was a game almost entirely for Navy and Marine trainees and it was only through the Navy's policy of permitting cadets in training at colleges to compete in varsity sports that football survived. The Army refused such permission and those schools without Navy or Marine trainees either abandoned the game or carried on with their remaining civilian students.

Fordham, Alabama, Stanford, and Syracuse were among the many schools that canceled schedules while a few others such as Harvard and Boston College played only on an informal basis. Ohio State, the No. 1 eleven of 1942; Nebraska, Temple, Pittsburgh, and Indiana had civilian teams and all took beatings week after week, as did Minnesota, Wisconsin, and Columbia, which had little in the way of manpower.

It was a strange season in which Navy and Marine transfers of national fame performed for new alma maters. Some were shifted in mid-season, a few even appearing twice against the same opponent. Perhaps the most outstanding transfer was Bill Daley, All-America back at Minnesota in '42, who went to Michigan and helped the Wolverines crush the once powerful Gophers and regain the Little Brown Jug for the first time in more than a decade. The play of Bob Steuber, former Missouri star, was another example of what can happen in a war year. Starting the season on the Chicago Bears' squad, Steuber was sent to DePauw as a V-5 trainee and finished the year as intercollegiate scoring leader.

But war or peace, it seems Notre Dame always stands for the best in college football. Almost from the start of the campaign, the Irish, with a number of former Big Ten stars to bolster the strength of a veteran squad, appeared to be the team of the year. Notre Dame rolled along faster with each passing week, overpowering nine rivals; then, in the very last minute of its tenth and last game, disaster struck. With only thirty seconds to play, the Great Lakes Naval Training Station fighters let fly a 46-yard pass that toppled the Irish, hailed as one of the great college teams of all time. So it was that Great Lakes, the wonder team of World War I and good enough to tie Notre Dame in 1942, scored the year's biggest upset. With its 19-14 triumph, Great Lakes succeeded where such strong elevens as Army, Navy, Michigan, Northwestern, Georgia Tech, and the Iowa Naval Seahawks had failed.

Despite that setback, Notre Dame clearly earned top-ranking nationally. It swept all before it until the last half-minute of a 600-minute campaign in spite of the fact that Angelo Bertelli, great passer

and key man of its T-formation attack, was lost in midseason. Bertelli was called up by the Marines for boot training, being just one of the many players who changed from football to service uniforms during the course of the campaign.

Navy, which lost only to Notre Dame and defeated Army for the fifth straight year before a restricted gathering of 15,000, was the leader in the East, trailed by the Cadets, Penn., and Dartmouth. Duke paced the Southern Conference, Georgia Tech led the Southeastern, and Texas the Southwest, while Tulsa won Missouri Valley honors. Oklahoma took the Big Six title and Colorado College annexed Rocky Mountain laurels. The Pacific Coast Conference championship was not decided until Jan. 1, 1944, when Southern California surprised even its most ardent followers by conquering Washington, 29-0, before 68,000 in Pasadena's Rose Bowl. Georgia Tech and Tulsa met at New Orleans on New Year's Day with Tech rallying to triumph, 20-18, in the most sensational game of the Sugar Bowl series as 69,000 persons looked on.

A wartime touch was added to the January 1 contests in a double-header at Oran, where an Army team beat a Navy eleven, 10-7, in the Arab Bowl after the Casablanca Ordinance "Rab Chasers" had toppled the Oran "Termites" by 7-6. The East and West played to a 13-13 tie in the annual Shrine game at San Francisco, Louisiana State beat the Texas Aggies, 19-14, in the Orange Bowl at Miami, and Texas deadlocked Randolph Field, 7-7, in the Cotton Bowl at Dallas.

Notre Dame and Michigan played to the season's biggest crowd, the record number of 86,000, while the Navy and Notre Dame drew 82,000 in their Cleveland meeting. Southern California and the College of the Pacific attracted 75,000 at Los Angeles and 76,000 saw Notre Dame topple the Army in New York's Yankee Stadium.

Professional football enjoyed the best season financially in its history, crowds in every city on the National League circuit setting new marks. The Chicago Bears captured the championship by crushing the Washington Redskins, defending titleholders, by 41-21 as Sid Luckman, former Columbia star, threw five touchdown passes to set a record for league play-off contests. Total receipts of \$120,500 also set a play-off record.

THOMAS V. HANEY.

FORCED LABOR. See BELGIUM, BOLIVIA, FRANCE, GREECE, NETHERLANDS, NETHERLANDS EAST INDIES, NORWAY, POLAND, UNION OF SOVIET SOCIALIST REPUBLICS, and YUGOSLAVIA, under *History*.

FOREIGN AND DOMESTIC COMMERCE, Bureau of. A Bureau of the U.S. Department of Commerce, charged with promotion and development of United States commerce. Its operations are (1) of a general economic character, such as reviews of broad trends and developments; (2) of specific, practical application to current business problems. It also serves as the direct liaison between American business interests and the Government. However, activities of the Bureau today largely concern the provision of a quick service of comprehensive reports on commodities and industries at the request of war agencies. Director in 1943: Amos Taylor.

FOREIGN BROADCAST INTELLIGENCE SERVICE (FBIS). See FEDERAL COMMUNICATIONS COMMISSION.

FOREIGN ECONOMIC ADMINISTRATION (FEA). During 1943 the foreign economic operations of the United

States government were consolidated in a single agency—the Foreign Economic Administration.

Established by Executive Order of Sept. 25, 1943, the FEA represents an actual merger of several previously independent administrative units, whose separate identity has been terminated. Foreign economic responsibilities and program operations of these several units are now carried out by FEA. The consolidated agencies are: the Office (Board) of Economic Warfare (to which an Executive Order of July 15, 1943, transferred the United States Commercial Company, the Rubber Development Corporation, the Petroleum Reserve Corporation, the Export-Import Bank, and the foreign economic activities of all other Reconstruction Finance Corporation (q.v.) subsidiaries), the Office of Lend-Lease Administration, the Office of Foreign Relief and Rehabilitation Operations, and the economic operations of the Office of Foreign Economic Coordination. (See the separate articles on ECONOMIC WARFARE, OFFICE OF; LEND-LEASE PROGRAM; RELIEF AND REHABILITATION.)

Functions of the War Food Administration and the Commodity Credit Corporation, with respect to the procurement and development of food and food facilities in foreign countries, were also transferred to the Foreign Economic Administration by Executive Order of Oct. 6, 1943.

Leo T. Crowley, as Foreign Economic Administrator, heads FEA. Associated with him in the Office of the Administrator are two Deputy Administrators, several assistants and advisors, and a number of special consultants. Six staff offices, headed by a General Counsel, and five Assistant Administrators, report directly to the Office of the Administrator. The staff offices include: General Counsel, Economic Programs, Organization and Methods, Personnel, Finance, and Management Services.

Down the administrative line are two bureaus—a Bureau of Supplies and a Bureau of Areas. The Bureau of Supplies includes the following Branches and Services—Requirements and Supply Branch, Foreign Procurement and Development Branch, Transportation and Storage Branch, Engineering Service, Statistics and Reports Service, a Trade Relations Staff, and appropriate consolidated commodity divisions. The Bureau of Areas includes the following Branches—General Areas, Pan-American, Liberated Areas, and Special Areas.

In general, the *Bureau of Supplies* analyzes foreign requirements and requisitions with reference to availability of supplies; presents supply claims to the appropriate allocating agencies; arranges for procurement of supplies in the United States, and initiates and administers procurement and development in foreign countries; regulates and expedites the flow of commercial exports; arranges for transportation, warehousing, and redistribution of commodities and materials; and performs other duties as outlined in the Orders. In carrying out many of its activities, this Bureau cooperates closely with the Bureau of Areas, directing its programs within the framework of area determinations.

In general, the *Bureau of Areas* makes broad program decisions regarding FEA operations in all areas, coordinating such programs and harmonizing them with State Department foreign policy and with military activities and requests; analyzes foreign requirements with reference to area considerations, and assists the Bureau of Supplies in presentations to allocating agencies; is responsible for economic intelligence and analysis work, and for preclusive buying and other economic programs; develops and directs FEA programs for liberated areas, including assigned activities related

to participation in UNRRA operations; supervises FEA field work; and performs other duties as outlined, working closely with the Bureau of Supplies in many of its activities.

All foreign representatives of the various agencies and corporations which have been merged in the Foreign Economic Administration have been placed in the FEA foreign missions, bringing actual consolidation of administrative machinery abroad as well as in the United States. See LEND-LEASE PROGRAM.

LEO T. CROWLEY.

FOREIGN EXCHANGE. See BANKS AND BANKING.

FOREIGN FUNDS CONTROL. A division of the U.S. Department of the Treasury. For its functions, see 1943 YEAR BOOK, p. 255.

FOREIGN RELATIONS. See UNITED STATES under *Foreign Relations* and the foreign countries under *History*; also PAN AMERICANISM; UNITED NATIONS.

FOREIGN RELIEF AND REHABILITATION OPERATIONS, Office of. See RELIEF AND REHABILITATION and the topics there listed.

FOREIGN SERVICE, U.S. See STATE, U.S. DEPARTMENT OF.

FORESTRY, FOREST PRODUCTS. See BUILDING MATERIALS under *Lumber*; CHEMISTRY under *Wood*; NATIONAL PARKS; PAPER AND PULP; WAR PRODUCTION BOARD under *Substitution*. For U.S. Forest Service, see AGRICULTURE, U.S. DEPARTMENT OF.

FORMOSA (Taiwan). An island near the southeast coast of China, ceded to Japan by China in 1895. Total area, including the Pescadores, 13,889 square miles. Total population (census of October, 1940), 5,872,084. Chief towns (1935 census): Taihoku (capital), 278,446; Tainan, 111,959; Keelung, 84,978; Takao, 83,735. The chief agricultural products are rice (1,750,000 metric tons of rough rice in 1940-41), sugar (798,000 metric tons, 1940-41), tea, sweet potatoes, ramie, jute, and tumeric. Camphor is obtained from the forests under a government monopoly. Livestock (1937): 1,849,195 swine, 282,101 buffaloes, 76,341 cattle, and 70,384 goats. Gold, silver, copper, and coal are the main minerals. Trade (1939): ¥408,649,840 for imports and ¥592,938,199 for exports (yen averaged \$0.2596 for 1939; \$0.2344, 1940). Budget (1940-41): ¥269,457,562. Governor General, Sieso Kobayashi.

As a war measure, the administration of Formosa was unified with that of Japan proper in 1942 and placed under the Japanese Home Ministry. Japanese airports, military centers, and shipping in Formosa were repeatedly attacked by American and Chinese planes based in China during 1943.

See CHINA and JAPAN under *History*.

FOUNDATIONS. Great activity in building construction, especially in large buildings for military use and for war industries, has not involved much deep or difficult foundation work. Many such buildings notable for great floor area are only one or two stories high and of light construction, so that their weight can be carried by simple surface foundations. Many of them are intended, also, for a life of only a few years. Where heavy cranes or machines are required, special foundations must be provided independent of those of the building. Furthermore, rapidity of construction has been a leading consideration, avoiding delays incident to foundation works. Even for the great arched

hangars for airplanes, the weight is not critical, and the lateral thrust is taken up by substantial concrete supports or by transverse members beneath the floor connecting the feet of the arches.

Of interest, however, is the construction of concrete footings or surface foundations during extreme winter weather. In all cases, two governing factors are local geological conditions and permissible cost. Earthquake stresses may be a factor in certain localities. At a large ordnance plant, where irregular surface of the site would have required columns sunk to various depths to a suitable stratum, the soft upper soil was removed and replaced with compacted fill, like an embankment, providing ample support for surface footings.

At shipbuilding docks, consolidation and drainage of soft ground and filling was effected by sand piles. For these, 12-in. pipes were driven, each closed by a loose bottom plate to exclude and consolidate the material. After filling the pipe with sand and gravel, under air pressure, it was withdrawn, leaving the bottom plate and forming a core of firm sand and gravel. In some pipes, a 4-in. perforated pipe was inserted and connected to a pump to drain the soil. In a somewhat similar case for a heavy riverside plant for unloading coal from barges, 18-in. steel tubes with closed ends were driven through soft ground, then cleaned out by compressed air and filled with concrete.

Rapid construction of deep foundations was required for the piers of the Peace River suspension bridge on the Alaska Highway, so that in spite of extremely severe winter weather the piers and steel towers could be built before the ice went out. With ice $4\frac{1}{2}$ ft. thick, all construction work was carried out upon it, and was finished a few days before the spring break-up of the ice. Another example of special conditions is the Kentucky Dam of the Tennessee Valley Authority, which is located near zones of earthquake disturbances, so that exceptionally massive construction was necessary to insure stability.

For a power house, with its ponderous machinery, 30-in. steel shells were driven 130 ft. through clay and sand and 10 ft. into solid rock. Each well or shaft was inspected by an engineer lowered into it, and after a steel beam had been set on end, to support a column of the building, the shaft was filled with concrete. To carry the massive concrete deck of a Navy dry dock, built on a submerged site, 54-in. steel shells, similar to the above, were driven to depths of over 100 ft., and after being cleaned and pumped out the shell was filled with concrete placed by pumping through a 6-in. pipe lowered to the bottom of the shell.

Modern foundation work includes many cases of supporting or underpinning existing foundations which have deteriorated with age or are inadequate to prevent settlement. Two such cases in South America are worth noting. At Sao Paulo, Brazil, a concrete 24-story office building, 360 ft. high, had tilted 2 ft. out of plumb owing to disturbance of the ground by excavation for an adjoining building. The sandy soil was consolidated by the freezing process, by means of pipes driven 60 ft. to reach a firm stratum. Shafts 4 ft. in diameter were then sunk through the frozen ground to this stratum and filled with concrete to form foundation piers. At Buenos Aires, Argentina, an extension of the underground railway was so located as to pass under tall and heavy buildings. Before tunneling, shafts were sunk under the buildings to a depth below the future tunnels and were filled with concrete as piers to carry the buildings. When the tunnel excavation encountered one of these piers it was

cut away to such a height as to be seated on the concrete arch of the tunnel.

E. E. RUSSELL TRATMAN.

FOUNDATIONS AND TRUSTS. See **PHILANTHROPY**.

FPHA. Federal Public Housing Authority. See **NATIONAL HOUSING AGENCY**.

FRANCE. A state of Western Europe. Following the German invasion and the French capitulation of June 22, 1940, the capital was transferred from Paris to Vichy. German and Italian troops remained in occupation of approximately one-half of France (111,910 square miles with about 25,000,000 inhabitants, excluding Alsace-Lorraine) from the commencement of the armistice on June 26, 1940, to Nov. 11, 1942, when the remainder of France was occupied.

Area and Population. Through the annexation of Alsace-Lorraine by Germany in 1940, France lost 5,605 square miles of territory and a population of 1,915,627 (1936 census figures). This left an area of 207,117 square miles and a population estimated at 40,800,000 in 1940. In 1943 the population of France minus Alsace-Lorraine was estimated at less than 38,000,000. Of the decrease, the excess of deaths over births accounted for about 600,000; emigration, about 400,000; and war prisoners and workers held in Germany for nearly 1,500,000. According to a German source, there were 93,000 more deaths than births in France minus Alsace-Lorraine in 1942. The live birth rate fell from 14.6 per 1,000 inhabitants in 1939 to 13.0 in 1941. The death rate, excluding war losses, was 15.5 per 1,000 in 1939, 18.2 in 1940, and 17.4 in 1941. The infant death-rate was 63 per 1,000 in 1939, 91 in 1940, 75 in 1941, and 70 in 1942.

On the basis of the number of ration cards issued, German occupational authorities in February, 1941, estimated the population of Paris, with suburbs, at 4,247,957. Populations of the chief cities at the 1936 census were: Paris proper, 2,829,746; Marseille, 914,232; Lyon, 570,622; Bordeaux, 258,348; Nice, 241,916; Toulouse, 213,220; Lille, 200,575; Nantes, 195,185; Strasbourg, 193,119; Saint-Étienne, 190,236; Le Havre, 164,083; Toulon, 150,310; Rouen, 122,832; Nancy, 121,310; Reims, 116,687; Roubaix, 107,105; Clermont-Ferrand, 101,128.

Colonial Empire. The colonies, protectorates, dependencies, and mandated territories of France had a total area of some 4,617,579 square miles and a total estimated population of 70,000,000 in 1938. For the fate of the colonial empire during the course of World War II, see sections on *Government* and *History* below. Also see the separate articles in this YEAR BOOK covering each of the following divisions: ALGERIA; CAMEROUN, FRENCH; FRENCH EQUATORIAL AFRICA; FRENCH GUIANA; FRENCH INDIA; FRENCH INDO-CHINA; FRENCH OCEANIA; FRENCH SOMALILAND; FRENCH WEST AFRICA; GUADELOUPE; MADAGASCAR; MARTINIQUE; MOROCCO; NEW CALEDONIA; NEW HEBRIDES; RÉUNION; ST. PIERRE AND MIQUELON; SYRIA AND LEBANON; TOGO, FRENCH; and TUNISIA.

Religion and Education. With the exception of about 1,000,000 Protestants and a few thousand Jews, the French people profess the Roman Catholic faith. Seven per cent of the population of five years and over were illiterate at the 1931 census. Under the Vichy regime, the educational system was reorganized along authoritarian lines. Physical education, manual training, and religious instruction in the schools were stressed. The law of July 7, 1904, prohibiting members of religious orders

from teaching in public schools, was abrogated in September, 1940. The former system of free secondary education was abolished and the state directly subsidized private (mostly Roman Catholic) schools. A series of decrees issued during 1940 and 1941 deprived the Jews of legal equality and barred them from public offices, professions, journalism, etc.

Defense. By the terms of the armistice of June 26, 1940, the armed forces of metropolitan France were restricted to 100,000 lightly-armed men. This force was disarmed and disbanded when Hitler tore up the armistice agreement in November, 1942. Besides the German occupationary forces, there were in France in 1943 small militia forces used more or less as the private army of Chief of Government Pierre Laval, the unofficial military units organized by the rival pro-German collaborationists, Jacques Doriot and Marcel Déat, and an underground patriot army estimated at 50,000 men.

When the Fighting French and Giraudist movements were merged to form the French Committee for National Liberation in June, 1943, the forces under Gen. Charles de Gaulle reportedly consisted of 85,000 troops, 2,500 air force pilots and ground crews, and 49 naval vessels with 6,150 men. Gen. Henri Honoré Giraud had under his command an armed force of between 300,000 and 400,000 men, which was being equipped with American arms, and the remnants of the French Mediterranean fleet. To this naval force was added during 1943 the French squadron that had been interned at Alexandria and other warships neutralized at Fort-de-France, Martinique, since June, 1940. See *History* below.

Production. About 38 per cent of the prewar working population was directly engaged in agriculture, 31 per cent in industry, and 11.5 per cent in commerce. There were 50,148,088 acres of arable land (37 per cent of the total area) in 1937. Yields of the chief crops in 1939, except as stated, were (metric tons): Wheat, 7,150,000 in 1941; barley, 1,357,000; rye, 753,000; oats, 5,271,000; corn, 605,000; potatoes, 14,410,000; beet sugar, 640,000 in 1941-42; tobacco, 33,600. Figures for cereals and potatoes exclude Alsace-Lorraine. The wine production in 1942 was 836,000,000 gal. Livestock in 1939: 2,692,000 horses, 135,000 mules, 185,000 asses, 15,622,000 cattle, 9,872,000 sheep, 7,127,000 swine, and 1,416,000 goats. An authoritative 1943 estimate placed the decrease in wheat and sugar-beet production from the prewar level at one-third; in vineyard output, nearly one-half; in the number of sheep and cows, about one-fifth; horses, one-sixth; cattle, little if any decrease; hogs, almost 100 per cent.

Mineral and metallurgical production in 1940 was estimated as follows (in metric tons): Coal, 51,000,000 (33,600,000 in 1941); iron ore, 35,000,000; pig iron, 8,000,000; zinc, 10,000; lead, 42,000; bauxite, 700,000; aluminum, 50,000; magnesium, 2,000; petroleum, 496,000 bbl. Production of rayon (q.v.) and staple fiber, 1941, was about 50,000 metric tons; natural phosphates, 82,000 metric tons in 1938. At the beginning of 1942, it was estimated that 60 to 80 per cent of the total industrial output was in execution of German orders. Industrial production in 1943 was estimated to be less than half the prewar output. The whole of French industry was operating at a loss of over five billion francs annually, according to an estimate by the *Frankfurter Zeitung*.

Foreign Trade. According to French press reports, imports in 1941 totaled about 25 billion francs (46 billions in 1938) and exports 14 billions (30.5

billions in 1938). The Franco-German clearing account for ordinary commercial transactions showed a deficit in Germany's favor of 30 billion francs in 1942.

Finance. Budget estimates of the Vichy Government for 1943, with 1942 estimates in parentheses (in billions of francs): Total receipts, 102 (80); expenditures, 128 (138.4); deficit, 26 (58.4). Expenditure estimates excluded German occupation charges, estimated at 120 billion francs for 1942.

The French internal debt rose from 445,742 million francs on Dec. 31, 1939, to 1,121,000 millions on June 13, 1943. Currency notes in circulation increased from 151,322 million francs on Dec. 31, 1939, to about 427,000 millions on June 30, 1943. Following the armistice of July 26, 1940, the franc was pegged to the reichsmark at the rate of 1 franc = 0.05 reichsmark, or \$0.02 at the German official rate (\$1 = 2.50 reichsmarks). As compared with the previous effective rate, the reichsmark was overvalued about 60 per cent. In unoccupied France, the franc was pegged to the U.S. dollar at 43.90 francs to \$1, or 1 franc = \$0.0228, up to Nov. 11, 1942.

Transportation. At the outbreak of World War II, France had about 26,427 miles of railway line, 393,761 miles of roads, 6,016 miles of navigable waterways, and airlines radiating from Paris to virtually all parts of France and the French Empire. All of these facilities were disrupted by the German invasion in May-June, 1940. See 1943 YEAR BOOK for extent of damage. Railway freight traffic for 1942 was about two-thirds that of 1938, but freight-traffic receipts rose by 16 per cent during the same period. Passenger receipts nearly doubled between 1938 and 1942 due to a 65 per cent rise in fares. On June 30, 1939, the French merchant marine comprised 11,282 vessels of 2,952,975 gross tons. About one-third of this tonnage was lost or destroyed by September, 1942.

Government. The beginning of 1943 found metropolitan France under German military occupation with the exception of a small Italian-occupied zone adjoining Italy. The legal government was the authoritarian regime established by Marshal Henri Philippe Pétain at Vichy, which had capitulated to Germany on June 22, 1940, and thereafter entered upon a program of limited but increasing collaboration with the Axis Powers. Under German pressure, Chief of State Pétain had delegated the powers of Chief of Government to Pierre Laval on Apr. 18, 1942.

The French overseas empire was divided in its allegiance. Martinique, Guadeloupe, French Guiana, Tunisia (occupied by German and Italian forces), and Japanese-occupied French Indo-China professed allegiance to the Vichy Government. Algeria, French Morocco, French West Africa, and the Allied-held districts of Tunisia were controlled by the pro-Allied administration established by Adm. Jean-François Darlan at Algiers on Dec. 1, 1942. Upon the assassination of Admiral Darlan on Dec. 24, 1942, Gen. Henri Honoré Giraud was elected head of the Algiers regime by the Darlan-appointed Imperial Council. With a few minor exceptions, the remainder of the French overseas empire adhered to the anti-German French National Committee, which was established in London in June, 1940, under the leadership of Gen. Charles de Gaulle. His Fighting French movement strongly opposed the policy of capitulation and collaboration with Germany adopted by the Pétain Government in France. For a detailed description of French political developments during 1940-42, see preceding YEAR BOOKS, especially the 1943

YEAR BOOK, pp. 26-29 and 258 f. For 1943 developments, see below.

HISTORY

The resurgence of France began in earnest in 1943, after two and a half years of profound humiliation and suffering under the German heel. Spurred on by the assurance of liberation provided by successive Anglo-American and Russian victories against the Axis Powers, the people of France and the overseas empire united their forces to join with their allies in driving the German invader from French soil.

Giraud Administration. Late in 1942 both de Gaulle and Giraud expressed a desire for the amalgamation of all French forces hostile to Germany. But the obstacles in the path at the beginning of 1943 were great. De Gaulle demanded that Giraud purge all former supporters of the Vichy Government from his regime, annul the Fascist legislation and governing methods introduced in North and West Africa under Vichy, and restore the laws of the Third Republic pending a decision by the liberated French people on their future course. Giraud at first ruled out the idea of political union with the Fighting French movement. He proposed only economic and military union against the Germans, and insisted that the Fighting French military forces in Africa be amalgamated under his command.

At the bottom of these differences in program was a basic divergence between the de Gaullists and Giraudists as to the causes and responsibilities for France's defeat and humiliation. Giraud and the leaders of the French military and naval forces in North Africa placed the primary responsibility upon the politicians and the Leftist tendencies developed under the Republic. De Gaulle, while admitting the necessity of extensive reforms in the Republic, blamed the reactionary, anti-democratic, and pro-Fascist elements in the armed services and in French political and economic life who rallied to Vichy for the failure to continue the struggle against Germany in 1940. There was, in addition, mutual suspicion as to the political ambitions of the rival leaders.

During their meeting at Casablanca January 14-24, President Roosevelt and Prime Minister Churchill brought de Gaulle and Giraud together for the first time but were unable to compose their differences. In fact the gulf between the two French leaders was deepened by the announcement that on January 12 de Gaulle's National Committee had formally accepted the adherence of the French Communist party. This disturbed the more or less conservative elements associated with Giraud. On the other hand the de Gaullists were angered by Giraud's appointment of Marcel Peyrouton, former Vichy Minister of the Interior, as Governor General of Algeria and member of the Imperial Council at Algiers, replacing Yves Chatel.

Another source of friction was the arrest of some de Gaullists in North Africa on January 10 in connection with the assassination of Admiral Darlan the previous month. The de Gaullists then asserted that the Darlan shooting was part of a Royalist plot to have the Imperial Council at Algiers establish a French monarchy headed by the Count of Paris. They charged that documents linking de Gaulle's followers with the murder were forged by the Royalist. As a result the de Gaullists arrested on January 10 were released. However the following December 26, on the first anniversary of the execution of Fernand Bonnier de la

Chapelle for the assassination of Darlan, high de Gaullist officials at Algiers publicly proclaimed him as one of their martyred associates. An Associated Press dispatch of December 22 from Algiers reported: "Through the year these facts have become apparent: The idealism of the young student, an ardent follower of Gen. Charles de Gaulle, was used by older men who never have been brought to trial. These men supplied the gun and the opportunity to shoot Darlan." At the request of the dead youth's parents, the Commissariat of Justice at Algiers on December 18 publicly denied other charges characterizing him as an Axis agent.

Vichyites Ousted. This friction between the two factions was accompanied by a gradual evolution of the Giraud regime away from the pro-Fascist leaders and principles associated with Vichy toward republicanism and closer ideological association with the Anglo-American powers. The trend was opposed in some high French military and political circles and by conservative French landowners and businessmen in North Africa. It was retarded by widespread anti-Semitism instilled by German and Vichy propaganda, and by the need for conciliating the large Arab Moslem population. The attention of both General Giraud and Gen. Dwight D. Eisenhower, the Allied commander-in-chief in North Africa, were centered upon the military struggle for Tunisia, in which both Giraudist and Fighting French troops fought by the side of the British and Americans (see *WORLD WAR*). Economic conditions in North Africa were rendered difficult by the resulting strain on Allied communications (see *ALGERIA* and *MOROCCO*, under *HISTORY*). But despite these obstacles, Giraud was forced to modify and reorganize his regime by pressure from the Anglo-American governments on the one hand and the reviving republican sympathies of the mass of the French population in North Africa on the other.

On February 4 he released unconditionally the 27 Communist Deputies imprisoned in North Africa since the beginning of the war. Working with the Giraudist authorities, an Anglo-American Joint Commission for Political Prisoners and Refugees secured the liberation by the end of June of every one of the thousands of persons held in concentration camps, forced labor gangs, or in restricted residence on Nov. 7, 1942. The Imperial Council was replaced by a "war committee" on February 5. On the same day General Giraud exchanged his title as High Commissioner for that of civil and military commander-in-chief. Four days later Governor General Peyrouton of Algeria created an elective Council of War Economy to deal with economic problems. He appointed Charles Brunel, former Mayor of Algiers and an ardent de Gaullist, as president of this body. The ban against admitting Jews into combat units of the French army was revoked February 16. In a speech to the Council of War Economy on March 1, General Giraud pledged his adherence to the principles of the Atlantic Charter.

One by one the high civilian and military officials in North Africa associated with the Vichy regime were replaced by anti-Vichyites acceptable to the de Gaullists. On March 15 Giraud accepted the resignation of Gen. Jean-Marie-Joseph Berget, deputy civil commander-in-chief in French North Africa and long considered the chief anti-Allied and pro-Vichy figure in Algiers. In a speech before the Alsace-Lorraine Society in Algiers on March 14 Giraud pledged the restoration of the democratic republican regime. He offered full cooperation with de Gaulle on the basis of republi-

can principles, and promised that once victory was won the French people would construct their "provisional government" according to the laws of the Third Republic.

In line with these promises, Giraud on March 16 banned all public pictures, signs, and slogans bearing the name or picture of Marshal Pétain. Decrees ending discrimination against Jews and Masons, restoring the local elected assemblies in North Africa, and banning all other Vichy legislation contrary to the laws of the French Republic were issued March 17. At the same time the Cremieux decree of Oct. 25, 1875, making the native Jews of Algeria automatically citizens of France, was abrogated as a form of discrimination against the Arabs, who were required to make formal application for citizenship. See ALGERIA.

Giraud-de Gaulle Negotiations. The liberalization of the Giraud regime in North Africa proceeded simultaneously with the negotiations between Giraud and de Gaulle for unification of their forces. In these discussions Gen. Georges Catroux, Fighting French Delegate General for Syria and Lebanon and a member of de Gaulle's Council for Defense of the Empire, served as permanent liaison officer between the two movements.

On February 23 de Gaulle's National Committee in London proposed the absorption of the Giraud administration for North and West Africa within the framework of the Committee, which they offered to enlarge "in accordance with new conditions." While ignoring the proposal that he accept a subordinate position under de Gaulle, Giraud accepted most of the principles espoused by the National Committee in his speech of March 14. A meeting between the two leaders was then arranged for early in April. But on the eve of de Gaulle's departure for Algiers it was reported that General Eisenhower had asked him to delay his trip indefinitely. Apparently the Anglo-American military and political representatives in North Africa expected that de Gaulle's arrival might precipitate a political crisis behind the lines when the battle for Tunisia was reaching a climax. Immediately afterwards the usual Sunday inter-Allied parades in Algiers were suspended because of political demonstrations by de Gaulle's supporters.

Two main points of divergence still remained between the two leaders—the retention of some former Vichy collaborationists in high positions under Giraud, and the opposite views held by Giraud and de Gaulle as to the provisional regime to be established pending the restoration of constitutional government in France. Giraud wanted a council made up of colonial governors and commissioners working in close collaboration with the military commander, who would be responsible for administrative functions and police powers in each liberated department of France. De Gaulle insisted upon an organization that would give representation to the French underground and control all military and colonial authorities.

A compromise solution on these questions was reached through Giraud's proposal of May 17 which was accepted by the French National Committee in London on May 24. Under this agreement Giraud and de Gaulle each named two other conferees, and these six designated one other by majority vote when they met for the first time in Algiers on May 31. The committee consisted of the two leaders plus André Philip and René Masigli (nominated by de Gaulle), and Jean Monnet and Gen. Alphonse-Joseph Georges (nominated by Giraud). These six selected General Catroux as

the seventh member. It was agreed in advance that this committee would administer French affairs within its sphere of control until all of France was liberated.

Meanwhile the growth of political partisanship among the adherents of de Gaulle and Giraud in French North Africa threatened to disrupt the efforts at unification. The Fighting French leader's popularity had been rapidly rising throughout North Africa, and apparently also in underground circles in France, as the victories of the Allies in Tunisia and elsewhere justified his course in 1940 and elevated him into a symbol of tenacious and successful French resistance. De Gaulle aggressively utilized this popular support to win a dominating position in the newly formed committee. At the first meeting on May 31 he demanded the immediate dismissal by General Giraud of Peyrouton, Noguès, and Boisson and the purging of other former Vichy adherents from leading civil and military positions before the governing committee was formally constituted.

Giraud contended that these issues should be decided after the constitution of the committee. At this point Governor General Peyrouton on June 1 forestalled dismissal by sending separate notices of his resignation to Generals Giraud and de Gaulle. For some unexplained reason his resignation did not reach Giraud for many hours after it was received and accepted by de Gaulle, who acted without referring the question to Giraud. This move made it appear as though de Gaulle had won control of the committee. Giraud countered by declaring that the committee had not yet been constituted and by asking Peyrouton to retain his post until the committee was legally able to act upon his resignation. His position was supported by the American and British Ministers in Algiers.

Committee of National Liberation. After three days of debate over the de Gaulle demands, the seven members of the committee formally constituted themselves as the French Committee of National Liberation on June 3. Giraud and de Gaulle were named co-presidents. General Catroux, who retained membership on the Committee, was appointed Governor-General of Algeria to succeed Peyrouton and Commissioner for Coordination of Moslem Affairs. In a statement issued the same day the Committee assumed the functions of the "French central power," including direction of "the French effort in the war in all forms and in all places," the exercise of "French sovereignty on all territories placed beyond the enemies' power," the administration and defense of all French interests in the world, and "authority over the territory, and the land, naval, and air forces which have up to the present time been under the authority of either the French National Committee or under the civil and military commander-in-chief."

The statement pledged the Committee to "turn over its powers to the temporary government which will be constituted in conformity with the laws of the Third Republic as soon as the liberation of the metropolitan territory permits it, and, at the latest, at the total liberation of France." It further bound the Committee "to reestablish all the French liberties, the laws of the republic and the republican regime, completely destroying the arbitrary regime and the personal power that is imposed on the country today."

A Cabinet of 14 commissioners to govern the French Empire under the direction of the Committee of National Liberation was named June 7,

as follows: Co-chairmen, Generals de Gaulle and Giraud; Foreign Affairs, René Massigli; Production and Commerce, André Diethelm; Labor and Social Affairs, André Tixier; Colonies, René Plevin; Interior (director of underground organizations in France), André Philip; Moslem Affairs, General Catroux; Justice, Education, and Public Health, Dr. Jules Abadie; Communications and Merchant Marine, René Mayer; Finance, Maurice Couve de Murville; Armament, Supply, and Reconstruction, Jean Monnet; Information, Henri Bonnet; Commissioner without portfolio, General Georges. Six of the new commissioners named were members of de Gaulle's Fighting French movement.

Meanwhile the purge demanded by General de Gaulle proceeded apace. General Noguès resigned as Resident General of Morocco June 5 and Governor General Boisson of French West Africa followed suit late in June. The Committee of National Liberation named Gabriel Puaux, Fighting French High Commissioner for Syria and Lebanon, to replace Noguès and appointed Jean Helleu to Puaux's former post. Pierre Cournaire, Governor General of French Cameroun, replaced Boisson at Dakar. A considerable number of other civil and military officials of pronounced pro-Vichy leanings were forced out.

Army Reform Issue. General de Gaulle's insistence that this purge should be extended to include numerous officers of the French army in North and West Africa brought another collision with Giraud. A deadlock ensued which persisted throughout June and threatened to disrupt the Committee of National Liberation. De Gaulle made a determined effort to deprive Giraud of the command of the French forces in North Africa or to obtain for himself the post of Minister of Defense with authority over Giraud as army commander. When it appeared likely that a majority of the Committee would support de Gaulle, General Eisenhower intervened.

With the approval of the British and U.S. Governments, he informed the Committee that he could not permit sweeping military reforms affecting the French North African forces nor the replacement of Giraud as their commander. The responsible Anglo-American authorities took the position that they could not risk politically-inspired changes that might impair the efficiency of the French forces while North Africa was being used as a base for combined Allied operations directed at the liberation of France.

The Anglo-American intervention was deeply resented by many de Gaulle supporters and even by some supporters of Giraud as an unjustified infringement of French sovereignty. A temporary solution of the political deadlock was reached June 22 when the Committee of National Liberation agreed to retain Giraud as commander-in-chief of French forces in North and West Africa and de Gaulle as commander of all other forces of the Empire. A permanent military committee was created to coordinate the armed forces under Giraud and de Gaulle and supervise their rearmament. Immediately thereafter Giraud, with the Committee's assent, visited the United States for military discussions involving the equipment, supply, and use of the French forces under his command. The re-equipment of Giraud's forces of some 300,000 men with the latest American arms had begun late in 1942.

Following Giraud's return from the United States and Canada, and a new flare-up within the Committee over the actions taken by the permanent military committee during his absence, a

more permanent solution of the military issue was reached on July 31. The Committee appointed Giraud as commander-in-chief of all French forces and named de Gaulle as permanent chairman of a new Committee of National Defense consisting of de Gaulle, Giraud, Gen. Paul Le Gentilhomme, a Fighting French officer who became Assistant Commissioner of National Defense, and the army, navy, and air force chiefs of staff.

In a communiqué issued the same day, the Committee of National Liberation defined the specific powers of its co-chairmen. Giraud was to direct discussions and execute decisions concerning national defense. De Gaulle was to preside over discussions and execute decisions in all other matters. The communiqué stated that the Committee "directs the general conduct of the war and disposes of all land, naval, and air forces." It also stipulated that Giraud would cease to exercise the functions of co-chairman during such time as he exercised an effective operational command. As commander-in-chief of the armed forces, Giraud was made responsible to both the Committee of National Liberation and the Committee of National Defense.

Committee's Position Strengthened. With the crucial question of the army command disposed of, the Committee of National Liberation proceeded to consolidate its position as the governing agency for all liberated French territories. The balance of power between the Giraud and de Gaulle factions was held by a group of moderates, who worked to limit the personal ambitions and powers of both leaders and bring them under the undisputed control of the Committee. When Giraud's army officers in Algeria attempted to curb de Gaulle press criticisms of the Allies and of some of Giraud's associates, the Committee on July 1 stripped Giraud of the police powers that he had assumed under the State of Siege Law of 1849 and delegated them to General Catroux, the Governor-General.

On July 6 the Committee dissolved Jacques Doriot's notoriously pro-Fascist French Popular party as well as the obligatory organizations of producers and merchants created in North Africa by the Vichy Government. In August it was decided to create a provisional consultative assembly to review the Committee's policies and actions. Mobilization for the war effort of all French citizens and subjects within and without the Empire was voted September 3. At the same time responsibility for maintaining order in North Africa was transferred from Giraud's military command to Governor General Catroux of Algeria and the Resident Generals of Morocco and Tunisia. The resistance movement in metropolitan France was given direct representation on the Committee September 6, when it was enlarged to include François de Menthon, co-director of one of the two largest underground organizations.

De Gaulle Establishes Primacy. Another step in the progressive whittling down of Giraud's authority followed on September 28. The Committee of National Liberation named General Le Gentilhomme as Commissioner for National Defense and gave him direct command of all nonoperational French military forces (garrisons and other static units) while leaving Giraud in control of strictly operational forces. On October 18 Jean Monnet resigned as Commissioner of Rearmament—which post was abolished—to concentrate on relief and rehabilitation problems.

Late in October the arrival in Algiers of delegates from the French underground organizations to the provisional consultative assembly gave

marked impetus to the de Gaulle boom. The resistance delegates, who were predominantly Leftists, reported that sentiment among patriotic Frenchmen was strongly de Gaullist. They were critical of Giraud's unwillingness to disavow publicly all ties with Vichy, and demanded a speeding up of the purge of former Vichy supporters in the territories controlled from Algiers.

The sentiment manifested by the Consultative Assembly after its convening on November 3 paved the way for the emergence of de Gaulle as the virtually undisputed leader of French resurgence. On November 6 Giraud resigned as co-chairman of the French Committee of National Liberation, leaving de Gaulle as the sole head. Giraud received an explicit guarantee that his position as military commander-in-chief was in no way impaired by his changed political status. But in a thorough shake-up of the Committee effected on the same date three of the Commissioners originally nominated by Giraud were eliminated and four additional posts were created and filled with direct representatives of the resistance movement in metropolitan France. The new 17-man Committee was overwhelmingly de Gaullist.

Those dropped were Generals Georges and Le Gentilhomme, Maurice Couve de Murville, and Dr. Jules Abadie. The new appointees were André Le Trocquer (Socialist), Commissioner for War and Air; Louis Jocquinot (Democratic Alliance), Navy; Emmanuel d'Astier de la Vigerie (leader of one of the largest French underground organizations), Interior; René Capitant (leader of the Combat resistance movement in North Africa), Public Health and Education; Pierre Frenay (resistance leader in France), Deportees and Prisoners of War; General Catroux, André Philip, and Henri Queuille (Radical Socialist), Commissioners without portfolio.

General de Gaulle on November 10 declared that the reorganization of the Committee assured acceptance of its authority by the French people. He emphasized that the Committee's authority extended "to all Frenchmen and in particular to all French forces and their chief." In an interview with a *New York Times* correspondent the next day, Giraud took occasion to state that he had no ties with Vichy and no reason to have them. During the remainder of the year there were recurrent reports of friction between General Giraud and some of his principal commanders on the one hand and the Committee, particularly the new Commissioner for War and Air, on the other. Giraud, in a fight to retain unhampered control of the military organization, repeatedly offered his resignation.

On December 6 it was revealed that Commissioner Le Trocquer had ordered Gen. Pierre Koenig, de Gaullist commander who won fame at Bir Hacheim, and at least two other generals confined to their quarters for short periods. It was reported that the dismissal of Lieut. Gen. René Bouscat, Chief of Staff for Air, had been prevented only through the intervention of Anglo-American commanders in North Africa. A new and important military figure entered the Algiers scene on December 22, when Gen. Jean de Latre de Tassigny escaped from France and offered his services to General de Gaulle. The general was sentenced by the Vichy Government to 10 years imprisonment for attempting to resist the German occupation of southern France in November, 1942.

Plans for New French Regime. As the year ended the Committee and the members of the Consulta-

tive Assembly were working on plans for the restoration of French independence in the wake of the expected Anglo-American invasion. The original proposals of the Committee, coupled with the partial restriction of the freedom of the press in North Africa in December, aroused suspicions in some quarters that de Gaulle was aiming at dictatorship. However some members of the Committee and of the Consultative Assembly appeared determined to avoid the imposition of a de Gaullist regime except with the consent of the French electorate.

Differences between de Gaulle and the French Communist party representatives in North Africa developed late in the year, raising the prospect of possible civil war in liberated France unless the breach were healed. The Communists had six delegates in the Consultative Assembly and were offered one or two places on the Committee of National Liberation. However de Gaulle rejected their demand for the appointment of a Communist selected by party officials to the Commissariat of Information. At the year's end the Communists were pressing the Committee to set itself up as the provisional government of France and to broaden its base by admitting members of the Communist party and the French General Federation of Labor.

Commission of Purification. In a fiery speech at Casablanca on August 8 General de Gaulle promised that France would punish as traitors "those so-called leaders who rushed headlong into capitulation in June, 1940." A Commission of Purification was set up by the Committee of National Liberation August 12 "to provide adequate sanctions against those elected persons, civil servants, or public agents who, since June 16, 1940, have by their acts or their general personal attitude either favored enterprises of the enemy or harmed the action of the United Nations and of resistant Frenchmen, or attacked constitutional institutions or fundamental public liberties, or knowingly drew or sought to draw direct material benefit from the application of Vichy regulations."

On recommendation of the Commission of Purification, the Committee of National Liberation subsequently ordered the arrest and trial of a considerable number of former Vichy officials. Among the leading personalities awaiting trial on treason charges at the end of the year were Pierre Pucheu and Marcel Peyrouton, former Vichy Ministers of Interior; General Bergeret; Pierre-Etienne Flandin, former Premier of France; Pierre Tixier-Vignancourt, former Vichy Secretary of Information; General Boisson; and André Albert, a former Deputy. According to his Commissioner for Justice, these arrests were preventive and the prisoners would not be tried until after the liberation of France.

A number of military, naval, and civilian officials charged with facilitating the entrance of Axis forces into Tunisia in November-December, 1942, were also arrested. On September 3 the Committee of National Liberation announced that Marshal Pétain and all the members of his "pseudo-government" would be placed on trial at the first opportunity. Two French rear admirals who failed to cooperate with the de Gaullist and Allied forces were forced into retirement December 8. They were François Michelier, commander of French naval forces at Casablanca at the time of the American landing, and René Emile Godefroy, commander of the French fleet interned at Alexandria in 1940-43. The Committee on December 18 decreed the dismissal or retirement of all civil

administrators and army and navy officers who were former members of "anti-Allied organizations" hostile to de Gaulle.

Empire Developments. With the German-Italian occupation of southern France in November, 1942, and the Allied military victories of the following spring, French colonial officials, diplomats, and military men who had remained loyal to the Vichy Government shifted their allegiance to either the Fighting French or to Giraud. Formation of the Committee of National Liberation terminated acute rivalries in some of the colonies between the de Gaulle and Giraud factions (see *FRENCH GUIANA* and *MARTINIQUE* under *History*). The day Tunis fell to the Allies (May 7), the French naval squadron that had been immobilized at Alexandria since the fall of France went over to General Giraud. This added one battleship, four cruisers, three destroyers, and one submarine to the United Nations naval strength.

Relations with Britain and U.S. The formation of the Committee of National Liberation and the subsequent settlement of the controversy over military reforms opened the way for limited recognition by the British and American Governments on August 26. Ever since its creation, the Committee had sought Anglo-American recognition not as the provisional government of France but as the organization qualified to insure the administration and defense of all French interests. However President Roosevelt recognized the Committee only "as administering those French overseas territories which acknowledge its authority." Moreover he made recognition conditional upon (1) the Committee's cooperation with the U.S. Government in the liberation of France, (2) its functioning "on the principle of collective responsibility of all its members for the active prosecution of the war," and (3) its acceptance of policies determined by the military requirements of the Allied commanders.

The Committee, Mr. Roosevelt stated, was not recognized as a government of France or of the Empire. He declared that "later on the people of France, in a free and untrammelled manner, will proceed in due course to select their own government and their own officials to administer it." The British note of recognition was similar in content but less blunt. On the other hand the Soviet Government recognized the Committee as "the representative of the State interests of the French Republic and leader of all French patriots fighting against the Hitlerite tyranny." This was much more in line with the Committee's wishes. Recognition by most of the other United Nations preceded or followed the Anglo-American action.

The terms of the Roosevelt recognition statement in particular reflected the coolness and even suspicion with which Anglo-American governmental circles regarded General de Gaulle. They attributed much of the difficulty experienced in obtaining French cooperation in the prosecution of the war to de Gaulle's alleged political ambitions and dictatorial tendencies. De Gaulle's supporters replied that he could not work with the pro-Fascist elements in the Darlan-Giraud administration without opening the door to fascism in postwar France. In June the British reportedly suppressed the de Gaullist weekly organ in London for its bitter attacks upon Anglo-American policy in North Africa.

After the Casablanca Conference, Anglo-American policy toward the French factions remained unified (see *GREAT BRITAIN* under *History*). De Gaulle protested on September 12 against the exclusion of the Committee from the negotiation and

signing of the Italian armistice. However Committee representatives were consulted regarding the armistice terms, which provided for the handing over of Corsica to the Allies and Italian evacuation of the French Riviera. In mid-September the British and U.S. Governments invited the Committee to name a representative to the Allied Armistice Commission in Italy. A U.S. lend-lease and reciprocal aid agreement formalizing the economic relationships between French North and West Africa and the United States was signed September 25. On November 18 the Committee made an additional \$15,000,000 payment to the United States for civilian supplies furnished French North Africa, raising the total sum paid for such supplies to \$56,340,000.

Allied acceptance of Italy as a co-belligerent in mid-October aroused further criticism from members of the Committee. Immediately afterwards de Gaulle and René Massigli conferred with Secretary of State Hull and Foreign Secretary Eden when they passed through Algiers en route to the Moscow Conference. De Gaulle again urged the admission of the Committee to the ranks of the United Nations. Following announcement of the results of the Moscow Conference (see *UNITED NATIONS*), the Committee on November 5 formally served notice that France would not consider herself bound by any decisions concerning Germany reached by the Allies without French participation.

Soon afterward further friction arose between the Committee and the Anglo-American governments over French repression of the independence movement in the Republic of Lebanon (see *SYRIA* and *LEBANON* under *History*). Under strong British and American pressure, this issue was tided over to the satisfaction of the various parties concerned. The year end found de Gaulle and the American Government still at odds over the terms under which the French Committee would enter France in the wake of invading Anglo-American armies. The British Foreign Office was said to favor acceptance of de Gaulle's view that the Committee should now be recognized as the provisional government of France.

Meanwhile Anglo-American forces in September had assisted French patriots and French troops landed from North Africa in restoring Corsica (q.v.) to French sovereignty. Through U.S. lend-lease aid, divisions of French and colonial troops in North Africa were equipped with modern arms and trained to take part in the coming invasion of France. On December 17 it was announced that French troops had taken over a sector of the Allied front in Italy.

Developments in France. Meanwhile in metropolitan France, patriot elements from all political parties and classes fought to prevent the Germans from enlisting French manpower and material resources to strengthen and defend Hitler's "European fortress." As in the preceding two and one-half years, the main phases of this many-sided struggle were (1) the measures taken by the Vichy Government on instructions from Berlin to carry out the German program, (2) the measures applied directly by the German military authorities, and (3) French resistance to both the Vichy Government and the German army.

Pétain's Role. Though continuing in office as Chief of State, Marshal Pétain played an insignificant role in French politics in 1943. He was now 87 years old. His once great prestige among the French people had been shattered by his acceptance of Pierre Laval (see *Government* above) and of the pro-

German and pro-Fascist policies for which the latter stood. Moreover he had surrendered most of his dictatorial powers to Laval in his Constitutional Act of Nov. 18, 1942.

In a radio broadcast on April 4, immediately following an American air raid on the Renault war factories in the Billancourt suburb of Paris, Pétain reiterated his determination "to give to France that regime of authority that is advised by the intelligence of the wisest and the common sense of the masses." He warned against the republic and its leaders and the dangers of "Communist barbarism," and protested the "unjustifiable Anglo-Saxon (air) attack." In June he issued a decree closing the session of the specially constituted Supreme Court of Justice at Riom, although the suspended trials of the leaders of the Third Republic were still uncompleted (see 1943 YEAR BOOK, p. 259).

On November 18 Pétain was prevented by the Germans from delivering a radio broadcast to the French nation. The text of this undelivered address was smuggled into Switzerland soon afterwards by the Marshal's agents. In it, Pétain said that if he died before ratification of the new Constitution, which the National Assembly entrusted him with drafting on July 10, 1940, the constituent power should revert to the National Assembly. He included in his address the text of a decree carrying out this mandate, which was to have been published on the following day in the Vichy's *Official Journal* but which was likewise blocked by the Germans, apparently with the approval of Laval. In recognizing the ultimate authority of the National Assembly, Pétain ignored Laval and made a bid for republican support. After being barred from the air, Pétain apparently went "on strike" against the Germans. He took no further part in affairs of state until Christmas Eve, when he broadcast an appeal to Frenchmen to end sabotage, factional quarreling, and resistance to the Vichy authorities, which he said threatened to engulf France in civil war.

Laval's Administration. Ignoring Pétain, the Germans used his Chief of Government, Laval, as their principal tool in extending the labor conscription program introduced in 1942, controlling French economic resources, and enlisting Frenchmen in the armed conflict with the United Nations. Laval had important conferences with Hitler at the end of December, 1942, and on the following April 29, at which he received his instructions, particularly as to the number of French workmen to be drafted for work in German factories. Laval's proposal for a permanent peace treaty to give France the status of a partner in Hitler's "new order" was curtly rejected. No formal arrangement was made to replace the German-French armistice annulled by Hitler on Nov. 11, 1942, with the result that the Vichy regime existed on mere tolerance as an arm of the German military administration.

Within this tottering structure, Laval continued his desperate struggle to hold his position and power against rival aspirants for Hitler's favor, such as Jacques Doriot, and the intrigues of members of his Government who were unwilling to accept him as the de facto successor to Pétain. This struggle was marked by Laval's repeated shakeups of his Cabinet, in each of which he concentrated more authority in his own hands; the widening of his grip over the police; the reported arrest in May of 150 Vichy officials and other Frenchmen accused of plotting to overthrow Laval; and the arrest by the Gestapo of members of the entourages of both Laval and Pétain who were suspected of going over to the anti-Vichy forces in France.

These defections increased after the formation of the French Committee of National Liberation in Algiers, and after the Allied invasion of Italy paved the way for the expected landings in France. To curb the growing spirit of defiance and resistance among the populace, Laval early in August issued new and more stringent regulations restricting the right of assembly in public places.

A series of Vichy decrees extending the labor draft goaded the French people to the verge of open rebellion. Laval's militia and police forces aided the German press gangs in rounding up increasing numbers of French workers for labor in German war factories or on fortifications in France. Youths between 20 and 22 were ordered conscripted in February. Toward the end of March the age limit was extended to include those between 20 and 31. Every Frenchman between 18 and 50 was required to carry a certificate of employment; those caught without such cards after April 20 were subject to deportation to the Reich. All opposition to the draft was treated as "communistic agitation" and crushed by the Vichy police and the Gestapo through arrests and internment. Vichy sources placed the number of French workers sent to Germany during the first quarter of 1943 at 250,000. On June 5 Laval announced over the Paris radio that he had agreed to send 200,000 more workers to Germany between March 1 and July 1. To do this, he ordered the military class of 1942 mobilized "for work." By the middle of 1943 it was estimated that 900,000 Frenchmen were at forced labor in Germany in addition to some 1,250,000 French prisoners of war.

Laval in January dissolved Marshal Pétain's Tricolor Legion and formed a new militia organization under his direct command, organized and uniformed like Hitler's Elite Guard. The Germans, however, restricted Laval's private army to the former free zone in southern France. In the occupied zone delimited in the 1940 armistice, the French Nazi storm troopers organized in separate armies by Doriot and by Marcel Déat, chief of the collaborationist National Revolutionary Front, were left undisturbed. A number of Frenchmen joined Laval's militia for the purpose of escaping the German labor draft. But the militia soon became engaged in a vicious, bloody warfare with underground patriot organizations. Many of the militia leaders were assassinated. Attacks upon its members were of daily occurrence. Supported by the Gestapo and German occupation troops, the militia retaliated with wholesale arrests and numerous shootings. Vichy authorities announced December 28 that between October 1 and Christmas Eve the police made 21,651 arrests.

The same day the German Ambassador to Vichy, Otto Abetz, reportedly demanded that Pétain reorganize the Laval Government to include Marcel Déat as Secretary of Interior. Déat was expected to deal more sternly with anti-German saboteurs and terrorists. Laval headed off his rival on December 30 by reshuffling his Cabinet and entrusting three of his adherents with the task of suppressing the underground. He appointed Marcel Lemoine, former prefect of Marseille, as Secretary of Interior; Joseph Darnand, chief of the militia, as Secretary for Maintenance of Order; and Leon Parmentier as Director General of national police.

Direct German Rule. Large-scale deportations of French youths to Germany were regarded as part of the German plan to prevent the rallying of the French nation to the assistance of an Allied invasion. In addition, the Germans seized more prominent French men and women as hostages, among

them the wives of Generals Giraud and Bergeret. On April 5 the German Foreign Office announced the removal to Germany "for military reasons" of former Premiers Daladier, Blum, and Reynaud, of General Gamelin, and of former Minister of Interior Georges Mandel, all of whom had been imprisoned by the Vichy Government. Ex-Premier Herriot was reported arrested and removed to the Reich in May, and in August the same fate befell Albert Lebrun, former President of the French Republic. The death of Mandel in a German concentration camp was reported from London June 5. Pétain was reported early in November to have secured Lebrun's release.

In Alsace and Lorraine, which had been formally incorporated in the German Reich, a process of ruthless Germanization continued against the stubborn opposition of the predominantly pro-French population. Special German courts sentenced numerous individual Frenchmen and in many cases whole families to imprisonment, death, or deportation. The German civil code was introduced at the end of February. Thousands of Alsatian youths were conscripted for service in the German armies and sent to the Russian front, where many perished. In July the Germans decreed the death penalty for all adult saboteurs and forced labor for minors caught cutting telephone and telegraph wires.

Early in January the German military authorities in southern France established a closed zone along the whole Mediterranean coast and began the construction of fortifications in depth. Hitler made inspection of his "Atlantic wall" defense in May and appointed a new commander of the northwestern region. The pro-Axis French military units were trained to assist the German occupation forces in resisting invasion and crushing internal risings. After the fall of Mussolini and the capitulation of Italy to the Allies, the Germans took over the task of guarding the Savoy and Riviera districts adjoining the Italian border that had been under Italian occupation. Meanwhile they continued the systematic looting of the scanty French food supplies through Vichy decrees conscripting grain and other crops.

Spread of Resistance. Goaded by hunger and oppression and inspired by the growing hope of early liberation, the French became more open in their defiance and more active in their underground warfare upon the Germans and their collaborators. Revolt flared in the Old Harbor area of Marseille in January when the Germans ordered the evacuation of the 40,000 inhabitants of the district. Some 300 men and women were killed by German artillery fire before the district ended armed resistance and submitted to the order. More effective was the resistance of patriot guerrilla bands that sought refuge from the labor draft in the mountains of the Haute Savoie and successfully fought off German and Vichy forces sent to round them up.

From all over France came almost daily reports of intensified bombings and shootings of German soldiers and pro-German French leaders and the large-scale sabotage of German communications. According to Fighting French sources in close contact with French conditions, the underground movement was now well organized and equipped with modern arms and supplies, some of which were dropped from Allied planes. Sections of Paris were placed under martial law in mid-August after street clashes between German troops and patriot bands.

The German authorities continued their efforts to crush resistance by wholesale executions of hos-

tages, innumerable arrests and deportations, the imposition of large fines on communities, and various other methods. The number of Frenchmen killed by German firing squads alone was estimated at more than 50,000. Late in August Marshal Gerd von Rundstedt, German military commander in western Europe, notified the Vichy Government that he was prepared to take "the sternest measures" to prevent a popular uprising in the event of an Allied invasion.

Meanwhile the various French underground organizations had formed a Council of Resistance to unify and coordinate their efforts. They were reported to have experienced a rapid gain in membership and strength and to have organized an "army" of some 50,000 men. They were also said to have agreed upon the following basic principles for the reconstitution of France as an independent nation: No dictatorship or authoritarian government, no "direction" by foreign powers, no connection between a French political party and a foreign nation, and the election of a National Assembly on a broader basis than that contemplated by the Giraud-de Gaulle agreement.

See AUSTRALIA, BELGIUM, CORSICA, EGYPT, GREAT BRITAIN, ITALY, NETHERLANDS, TUNISIA under *History*; BIRTH CONTROL; CHEMISTRY under *Foreign*; FRENCH LITERATURE; NAVAL PROGRESS; REFUGEES; SOCIALISM; THEATER; WORLD WAR.

RONALD STUART KAIN.

FRANKLIN INSTITUTE. The Franklin Institute of the State of Pennsylvania for the Promotion of the Mechanic Arts, founded in 1824, is devoted to the increase of useful knowledge, to the encouragement of invention and discovery, and to the education of the public in the achievements of science and industry. Its very title has always indicated a desire to do honor to Benjamin Franklin.

The Committee on Science and Arts, formed of 66 members of the Institute, reviews in great detail many of the advances of science and technology. It recommends to the Board of Managers those persons deserving the annual awards of the Institute, which are formally presented at Medal Day Exercises in the spring. A Franklin Medal, highest award of the Institute, was presented in 1943 to George Washington Pierce, who formerly held the chairs of Rumford professor of physics and Gordon McKay professor of communication engineering at Harvard University, in recognition of his outstanding inventions, his theoretical and experimental contributions in the field of electric communication, and his inspiring influence as a great teacher; and to Harold Clayton Urey, Professor of Chemistry and Executive Officer, Department of Chemistry, Columbia University, in recognition of his discovery of an isotope of Hydrogen of Mass 2, which has resulted in the opening of new fields of knowledge in three of the physical sciences.

The Franklin Institute includes in its activity publication of *The Journal of the Franklin Institute*, established January, 1826, and lectures presented about 20 times a year by distinguished persons in science and industry. From the laboratories of the Bartol Research Foundation and the Biochemical Research Foundation, additions are constantly being made to scientific knowledge. The two laboratories, the machine shops, and the staff of the Institute are all working to the fullest extent in the war program. The Institute also operates a seismograph and promotes scientific expeditions. The seismograph and observatory, with Franklin Hall and the Fels Planetarium, together with its 4,000 active exhibits constitute the Institute's mu-

seum. The library now numbers 123,000 volumes and 40,000 pamphlets, devoted entirely to works on applied science and technology, and is particularly noted for the collection of patent literature. To make Franklin better known and emulated, the National Franklin Committee was formed in 1941. All information is distributed free.

President, reelected in 1942, Charles S. Redding; Secretary and Director, Henry Butler Allen. The Institute is located in a new building on Benjamin Franklin Parkway, Philadelphia, Pa.

FREEDOM OF RELIGION, SPEECH, etc. See **LAW** under *Decisions Concerning Personal Liberties*; **NEWSPAPERS**; **EIRE**, **HONDURAS**, and **U.S.S.R.** under *History*; also, **ART** under *Painting*.

FREEDOM OF THE AIR. See **AERONAUTICS** under *Post-war Air Policy*.

FREEMASONRY. Within the past year, Freemasonry in all the English-speaking nations has worked successfully to adjust its activities to the realities of war. Save in Sweden and Switzerland alone, our Brethren on all the Continent of Europe have been scattered, their Temples profaned, their property pillaged, yet they are still keeping the faith. Those who have gone into exile have almost invariably made haste to establish new Masonic connections, whether in associations and even in Lodges of their own or as guests in existing Lodges.

Once again the United Grand Lodge of England had to mourn the passing away of an illustrious Grand Master. In January of this year the Duke of Kent was killed in an airplane accident in the service of his country. On June 1 the Earl of Harewood was installed as Grand Master by King George. The ceremony was most impressive, with many notables present from neighboring Grand Lodges.

Service and Sacrifice are indeed watchwords of Masonry in the British Isles. The Grand Lodge of Ireland, for example, reports that its two Lodges on the Island of Malta have sent their usual monetary contribution to funds maintained by the Grand Lodge.

Notwithstanding all the other drains of wartime, the Irish Brethren are able to report not only that they are keeping up their usual philanthropic work but are able in some respects to increase their donations. Similar accounts come from Scotland, where the Grand Lodge reports its chief philanthropic funds in satisfactory condition.

The American Craft in Time of War. Among the forty-nine Grand Lodges of the United States readjustment of normal peacetime activities to meet the exigencies of war has continued to dominate the thinking of the Craft. Pecuniary gifts have poured out in unprecedented volume. Here and there Brethren have debated the forms and uses to which gifts should be put, but there has been no argument about the necessity for giving. In general it may be said that American Masonic leadership has been animated by a desire to serve, rather than to direct; to support existing public agencies rather than to supplant them.

The war has been responsible for dislocations and novel problems of great complexity. It seems quite possible, for example, that in many States after the war the entire present system of administering philanthropic enterprises will have undergone profound changes. For one thing, governments, State and Federal, are taking over more and more from private hands the management of relief and care of the helpless. Already the effect

of this has been felt by many Grand Lodges. The Grand Lodge of Tennessee, for illustration, has sold its Masonic Home property to the State, providing for the residents in other property obtained on lease and endeavoring to take charge of orphans and elderly beneficiaries in their respective localities. The Jurisdiction of Rhode Island is also in process of revising its philanthropic set-up.

The national falling off in membership which began some ten years ago is being steadily, if slowly, arrested. Eighteen Grand Lodges actually report gains for the year, though in some instances these have been small. Ten of these are in the South and Southwest, six in the Midwest, two in the West. In 1943 there were 15,231 Lodges in the United States, having a combined membership of 2,481,440.

The annual conferences of the Grand Masters, Grand Secretaries, and the Masonic Service Association at Washington in February were attended by representatives of all forty-nine American Grand Jurisdictions, including Grand Masters from all but three of them. The shadow of war fell over most of these deliberations. There were talks about Freemasonry's obligation to those who are defending the principles of democracy and Freemasonry; about the status of chartered American Lodges in regions overrun or menaced by the enemy; about experiences gained in the last war; about the purchase of war bonds, and about contributions to the comfort of Masons under arms.

The Masonic Service Association had a busy and eventful year. Although its membership includes a majority of the American Grand Jurisdictions, others have preferred to give independent support to various phases of its work and still others have worked separately along their own preferred lines.

The Far East. Masonry in the Far East, overwhelmed by the disaster of Japanese militarism, has found encouragement in the news from California that Grand Master Wood has granted a dispensation to twenty-five Brethren in Chungking, China, to form a Lodge to be known as Fortitude Lodge, U.D. The suppression of Masonry in the Philippines brought complexities for Masons from the Archipelago who are residing in the various American Grand Jurisdictions. Not least of these is the difficulty of maintaining themselves in good standing. California has eight Lodges in the Hawaiian Islands which continue to meet, even though they must take counsel with a Military Governor as to time and place of meeting. One of the Hawaiian Lodges had sent over a contribution for war relief. Right in the battle zone, Pearl Harbor Lodge has participated in every event, both public civilian and Lodge work.

In Australia and New Zealand Masonry is evidently meeting wartime conditions with sturdy resolution. Not only are they taking care of their own, but they are making special effort to show Masonic hospitality to visitors in the armed forces of the United States. In Western Australia an effort continues to unite the Lodges working under jurisdiction of the Grand Lodge of Scotland with those working under the Grand Lodge of Western Australia. The Board of General Purposes of the Grand Lodge of Tasmania has approved plans for the erection of a new Temple at Waratah and has prepared a traveling certificate for Brethren on active military service.

Masonry North of the Border. Reports from Grand Lodges on both sides of the border between the United States and Canada continue to emphasize friendship and reciprocal esteem. It is exceptional when any Jurisdiction on either side holds an An-

nual Communication which is not attended by distinguished guests from the other side. Notwithstanding the terrific strains which the war has imposed upon Canada, the Lodges and Grand Lodges of that country have carried on their Masonic work with undiminished vigor.

Mexico. Because of irregular Lodges and Grand Lodges in Mexico, the Masonic picture in that country is still a little blurred, but there is reason to believe that those which have obtained recognition as regular by the Grand Lodges of the United States are continuing to prosper. Among these is the York Grand Lodge of Mexico, which is recognized by all but two Jurisdictions in the United States. This body at its Annual Communication in April voted to extend fraternal recognition to "members in good standing of the respective constituent Lodges under the Jurisdiction of the regular State Grand Lodges of the Republic of Mexico."

See ALGERIA, FRANCE, and MOROCCO.

FRENCH EQUATORIAL AFRICA. A French colonial territory consisting of the four colonies: Chad (461,202 sq. mi.; capital, Fort Lamy), Gabon (93,218 sq. mi.; capital, Libreville), Middle Congo (166,069 sq. mi.; capital, Brazzaville), and Ubangi-Shari (238,767 sq. mi.; capital, Bangui). Total area, 959,256 sq. mi.; total population (Jan. 1, 1938 estimate), 3,500,000. Capital, Brazzaville.

Production and Trade. The principal agricultural products are palm kernels and oil, coffee, cacao, cottonseed (41,400 metric tons in 1940-41), cotton (18,000 metric tons, 1940-41), and rubber (about 5,000 tons, 1942). Tropical forests of 300,000 square miles in area contain many trees of industrial value. In the Chad colony large numbers of cattle, sheep, horses, donkeys, camels, and ostriches are raised. Ivory is an important export. Copper, zinc, lead, gold, and diamonds are the chief minerals. Trade, values in old U.S. gold dollars (1938): imports \$5,000,000; exports \$4,500,000.

Communications. The chief ports are Pointe-Noire, Port Gentil, and Libreville. A railway, 318 miles long, connects Brazzaville with Pointe-Noire. Roads (1940): 14,713 miles. Since 1940 two new highways have been built across French Equatorial Africa in order to supplement sea lanes to the Allied armies in the Middle East. The northerly route, which has a branch from Takoradi on the Gold Coast, is from Duala through Fort Lamy near Lake Chad to Khartoum; the southerly route is from Duala through the colony of Ubangi-Shari to Juba in southern Anglo-Egyptian Sudan. A new north-south highway from Libreville to Brazzaville to Pointe-Noire has been completed and another connecting Bangui with Fort Lamy was completed late in 1942.

Government. Budget estimates (1940): revenue and expenditure balanced at 224,629,000 francs (franc averaged \$0.0208, 1940). French Equatorial Africa, by a decree of June 30, 1934, was constituted a single administrative unit under the control of a governor general, assisted by an administrative council. During 1940 French Equatorial Africa seceded from the Vichy Government in France and joined the Fighting French movement headed by Gen. Charles de Gaulle. Félix Eboué, French Negro governor of Chad Territory, who led this secession movement, was appointed Governor General of all French Equatorial Africa early in 1941.

FRENCH GUIANA. A French territory in northern South America, comprising the colony of French

Guiana (7,720 sq. mi.; pop. 31,000) and the hinterland territory of Inini (27,020 sq. mi.; pop. 6,000). The penal settlement had a population of 5,628 men. Chief towns: Cayenne (capital), 13,936 inhabitants; Mana; Oyapock, St. Laurent; Sinnamary. Rice, maize, manioc, cacao, coffee, bananas, and sugar cane are the chief agricultural crops. There are large forests rich in various kinds of timber. Gold mining is the chief industry (1,170 kilograms exported in 1939). Silver, copper, iron, lead, mercury, and phosphates are found. Foreign Trade (1940): imports 64,154,188 francs; exports 44,502,181 francs (franc averaged \$0.0208, 1940). Figures of finance since 1937 are not available. Shipping (1940): 378 vessels entered and cleared. Administration is controlled by a governor, assisted by a privy council of five members. There is a council general of eight elected members elected by French citizens living in the colony.

History. The French authorities in French Guiana, who had adhered to Marshal Pétain's Government at Vichy upon the collapse of the Third Republic in 1940, were ousted on Mar. 18, 1943, by a pro-Allied committee having the support of both the French military forces and the bulk of the population in the colony. The pro-Vichy Governor, René Véber, fled to Brazil after a popular demonstration in Cayenne, turning over his powers to the members of the committee—Colonel Vanegue, the military commander; M. Collat, the Colonial Secretary; and M. Sophie, Mayor of Cayenne.

The repudiation of the authority of Admiral Robert, Vichy pro-consul in charge of the French West Indies and French Guiana, inaugurated a struggle between adherents of Gen. Henri Honoré Giraud and Gen. Charles de Gaulle for control of the colony. General de Gaulle appointed M. Collat, the Colonial Secretary, as Acting Governor pending the arrival of Maurice Bertaut, then in Brazzaville, French Equatorial Africa, whom de Gaulle designated as permanent Governor. General Giraud sent Col. Albert le Bel post haste from Washington to serve as Acting Governor pending the arrival of his permanent appointee, Jean Rapenne.

The members of the committee and the inhabitants were divided in support of these rival claimants, with the military commander supporting Giraud. The United States and Brazil sent military missions to Cayenne at the end of March to observe conditions and prevent clashes between the rival factions. With U.S. support, the Giraudist appointees remained in control until the union of the de Gaullist and Giraudist factions in the French Committee of National Liberation at Algiers on June 3. On July 7 the Committee appointed Brig. Gen. Henri-Paul Jacomy as commander of French military forces in French Guiana and the French West Indies. It also confirmed M. Rapenne's appointment as Governor.

Meanwhile the anti-democratic Vichy decrees in effect in French Guiana had been revoked, political prisoners released, and pro-Vichy officials purged from the lower ranks of the administration. The United Nations blockade aimed at the Vichy regime was ended, and trade resumed with the United States, Brazil, and British and Dutch colonies in the West Indies. See FRANCE and MARTINIQUE under *History*.

FRENCH INDIA. The five French colonies in India—Chandernagor, Karikal, Mahé, Pondichéry, and Yanam. Area, 196 square miles. Population (1941), 323,295. Capital, Pondichéry, 53,101 inhabitants. Education (1941): 62 primary schools and 5 colleges, and 14,324 students.

Production and Trade. The chief crops are rice, manioc, and groundnuts. Livestock (1941): 29,516 sheep, 19,310 cattle, and 19,962 goats. There are cotton and jute mills at Pondichéry and Chandernagor. Trade, at the ports of Pondichéry and Karikal (1940): imports 52,040,000 francs; exports 72,853,000 francs (franc equaled \$0.0208, 1940). Shipping (1940): 255 ships entered and cleared. There were 43 miles of railway open to traffic.

Government. Budget (1942): revenue and expenditure balanced at 3,274,860 francs. A governor heads the government of the colony. There is an elective general council.

FRENCH INDO-CHINA. A French dependency in southeastern Asia comprising the divisions shown in the accompanying table. It was occupied by Japanese forces in 1940 and 1941.

Division	Sq. mi.	Pop. (1936)	Capital
Annam ^a	57,143	5,656,000	Huế
Cambodia ^a	69,884 ^a	3,046,000	Pnom-Penh
Cochin China ^b	25,096	4,616,000	Saigon
Kwangchow ^c	309	230,000	Fort Bayard
Laos ^c	89,189 ^c	1,012,000	Vientiane
Tonkin (Tongking) ^a	44,787	8,700,000	Hanoi
French Indo-China....	286,408 ^c	23,260,000	Hanoi ^d

^a Protectorate. ^b Colony. ^c Also known as Kwangchow; leased from China for 99 years in 1898 (territory increased in 1899) and placed under the authority of the Governor General of French Indo-China. ^d The capital city is Hanoi, but during certain seasons of the year, when climatic conditions are oppressive, the government offices move to Saigon. ^e Figures include 26,664 sq. mi. of territory in Cambodia and Laos ceded to Thailand under the terms of a border agreement signed on July 30, 1942, which carried out the territorial provisions of the treaty signed between the Pétain regime of France and Thailand at Tokyo on May 9, 1941.

The total estimated population on Jan. 1, 1940, was 23,950,000. Chief towns: Hanoi, the capital, 134,849 inhabitants in 1940; Binh-Dinh, 147,199 (1936); Cholon, 145,254 (1936); Haiphong, 122,000 (1936); Saigon, 110,577 (1936); Pnom-Penh, 102,678 (1936); Huế, 83,222 (1936); Fort Bayard, 12,000 (1936).

Education. See 1943 YEAR BOOK, p. 267.

Production. The principal agricultural crop is rice, but recent figures of production are not available. Rubber produced during 1941 was estimated at 67,200 metric tons. Maize, pepper, spices, tea, kapok, groundnuts, and copra are other agricultural products. Minerals produced included anthracite (2,456,000 metric tons in 1940), gold, chromite, manganese, tungsten, antimony, tin, zinc, and iron. Trade (1939): imports 2,382,262,000 francs (cotton and silk tissues, metal goods, and motor vehicles were the chief items); exports 3,494,724,000 francs (rice and rubber were the main items). The franc was worth \$0.0251 in 1939; one piaster equals 10 French francs.

Communications. In 1940 there were 22,658 miles of roads, 2,093 miles of railways, 9,687 miles of telegraph lines, 8,932 miles of telephone lines, and a radio-telephone service from Saigon to Europe. A highway between Paksane and Thakhek, 73 miles in length, along the Mekong River, was completed in 1943.

Finance. The general budget for 1941 was balanced at 1,290,147,500 francs and the extraordinary budget at 189,337,800 francs. The public debt on Jan. 1, 1941, was 2,515,894,110 francs.

Government. The government for the whole of French Indo-China was administered by a governor general assisted by a secretary general, a government council, and a grand council for economic affairs. Cochin China, a direct French colony, was headed by a governor aided by a colonial council.

Each of the four protectorates (Annam, Cambodia, Laos, and Tonkin) was headed by a resident superior assisted by a protectorate council and a council of economic affairs. Governor General, Adm. Jean Decoux (appointed July 20, 1940). After the Japanese occupation, the French administration served as a puppet government, carrying out directions of the ranking Japanese military commander and diplomatic representative. For 1943 developments, see below.

History. According to neutral travelers, who left French Indo-China early in October, 1943, the Japanese were adhering more strictly than in 1942 to the Vichy-Tokyo pact of July 29, 1941, which ratified the previous Japanese occupation of key points within the dependency (see 1942 YEAR BOOK, p. 224, for provisions of the pact). The French administration of Governor General Decoux was said to control all essential services. Decoux, it was reported, had presented an increasingly strong front to the Japanese, who displayed a growing desire for French cooperation as their military outlook worsened.

Japanese efforts to increase rice shipments from French Indo-China by 400,000 tons annually were resisted. The Governor General was said to control an army of French soldiers, Foreign Legionnaires, and native troops which was stationed along the Tonkin-Chinese border. American planes based in China made frequent raids on Japanese-controlled bases and industrial plants in the northern part of the dependency, while American submarines preyed on Japanese shipping off the French Indo-China coast.

Representatives of the French Committee of National Liberation at Chungking, China, on December 10 promised that French Indo-China would be granted a "more liberal" political status and control of its own customs after the war. This declaration followed growing criticism of the prewar French administration in Indo-China among Chinese official and unofficial circles, coupled with suggestions for the termination of French rule. See JAPAN under *History*.

FRENCH IVORY COAST. See FRENCH WEST AFRICA.

FRENCH LITERATURE. Since the occupation of the whole of France (Nov. 11, 1942) and the closing of frontiers, all reliable news from the isolated mother country has had to be smuggled in; items were few, and they were unpleasant. The periodical *Université libre* of Nov. 24, 1942, listed a number of names of "intellectuels"—professors or writers—who were revoked or shot; among the second Jacques Decoux, the founder of the *Lettres Françaises*. Even since November, 1942, a rather strong group of French "intellectuels," has obstinately clung to adherence to the Vichy regime—for example, Roche, the director of the Odéon Theater since 1941, or the playwright Brasillach who was released from an "oflag" to allow him to become a Nazi propagandist in France. For the second year, a delegation of some French "collaborationists" went to the so-called "International congress of literature" at Weimar, among them such inveterate "collaborationists" as Drieu de la Rochelle, Alphonse de Chateaubriant, André Thérive; Giono, however refused to join, and Pierre Benoit, the Academician, declined to hear the Delegation. Men of similar dispositions signed a so-called "Manifeste des intellectuels" to protest the invasion of Africa by Americans: men like Jacques Boulenger, Jacques Chardonne, Ramon Fernandez, and the two Academicians, Abel Hermant and Abel Bonnard.

A new "Otto list" of French authors whose writ-

ings are forbidden by the Nazis (see YEAR BOOK, 1941) was published, to which two names were later added, Jules Verne and De Kerillis, the excellent weekly contributor to the New York *Pour la Victoire*. Two of the most important dailies ceased to appear, *Le Temps* and *Le Figaro*, the first being forced to discontinue, the second refusing to accept new restrictions. In this connection see a very relevant article "Bilan d'une trahison" reproduced from a clandestine paper and brought to light by *Pour la Victoire* (July 24), telling how Abetz, having failed to get a Nazi hold on the *Revue des Deux Mondes*, succeeded with the *Nouvelle Revue Française* which had been for years the organ of the progressive intelligentsia of France; it came to pass with the help of the arch-collaborationist Drieu de la Rochelle.

The happier counterpart to these outrages exists to a certain extent; but it has to be looked for outside of France, in America first of all. The torch was kept burning by such commemorations as the centenary of Jefferson's death in a ceremony at the "Ecole libre des Hautes Etudes" in New York, or by the Manifesto by 43 eminent French Catholic refugees, *Devant la crise mondiale* (published by the Ed. Maison Fr., N.Y., in the last part of 1942). Besides the Ecole libre des Hautes Etudes, the Lycée Français kept on prospering, as did also such French schools as Middlebury, Western Reserve, Mills College, and the Pontigny-Holyoke gatherings. The publication of books in French on this side of the Atlantic continued to grow in importance, especially after the complete stop of importations from France; the catalogues of firms like Brentano, Maison Française, Didier in New York, or Ed. de l'Arbre, Fides, Pony, Valiquette, Variétés, in Canada, are every day added to. Schiffrin, until recently editor of the collection "La Pléiade" in Paris, joined the staff of Brentano's, while Max Fisher, the alert head of the Maison Flammarion, Rue de l'Odéon, left Paris to found a great publishing firm in Rio de Janeiro, with Pony of Montreal as his Canadian associate. In Argentina, the output of French books continued important under the guidance of the vigorous quarterly *Lettres Françaises* (R. Caillois, editor).

The situation concerning the editing and publishing business had become somewhat confused, with the publishers trying to cater to very different classes of readers; some books were merely reprints from the works of popular writers no longer accessible in America: authors like Giraudoux, Valéry, Mme. Colette, Maurice Genevoix, Eve Curie, A. Carrel, Rimbaud. In a good many cases one could discern (often in the case of Canadian firms) a desire to favor publications with a Catholic trend: Bainville, Pesquidoux, J. Rivière (*A la trace de Dieu*), Péguy, Daniel Rops, Bordeaux, Fr. Jammes, or even René Schwob's *Cinq mystères en forme de rétable*. The bulk of publications, however, were those dealing with timely problems, which will be mentioned below.

A surprise development was that of French papers and periodicals published in the Western Hemisphere, some already a few years old, but a number of them very recent: weeklies like *Pour la Victoire*, *France-Amérique* (replacing *Amérique*), in New York; *Le Jour*, in Montreal; or monthlies, semi-monthlies, and quarterlies, like *Amérique française*, *La nouvelle Relève*, *Hémisphère*, *Lettres françaises*, *Renaissance*, *Revue de la Pensée française*, *Le messager de New York*, *French Forum*, *Revue française d'Amérique*, *Voici la France de ce mois*, *Le monde libre*. Add to this the young *Fontaine*, published in Algiers, which sprang up almost im-

mediately after the invasion of Africa, and *La France nouvelle* just founded in Buenos Aires.

For more detailed information the reader can be referred to valuable articles, and rapid bibliographies: G. Lountz (former Manager of "Office des Editions françaises" in Paris) "French Books after the Armistice" (*Books Abroad*, Winter 1943); Alb. Gaudin, "Témoignages" (*French Review*, January and February), publications related to the France of the war; and a list of publications along the same lines in the same *Review* (May 1943).

It is very difficult to draw a line of demarcation between what can be considered literature and what ought to be classified as merely propaganda, but surely some of the second group also belong to the first; the following amongst others: Saint-Exupéry, *Lettre à un otage*—the addressee is said to be Léon Werth, a friend of the author; Henri Laugier, *Combat de l'exil* (Professor Laugier left Canada where he was a refugee to accept, late in the year, the rectorship of the University of Algiers); Raoul Aglion, *L'Épopée de la France combattante*; Philippe Barrès, *Sauvons nos prisonniers*; Paul Vignaux (pseud. for Jacques Rochelle), *Traditionnalisme et Syndicalisme*, and *France, prends garde de perdre ton âme*; the first one expresses the opinion of liberal-minded Catholics who are also socialistic minded, and suggests enrollment of the working classes under the banner of the pope, thus forming a party facing the communistic socialism; G. Cohen, *Lettres aux Américains*. The satire of the Vichy government by the well known Pertinax (pseud. for André Géraud), under the title *Les Fossoyeurs* (*The Grave Diggers*) may be considered the most important contribution to this class of literature. Others are Daniel Halévy, *Trois épreuves, 1814, 1871, 1940*; J. Benda, *La grande épreuve des démocraties*; Yves Simon, *La crise de la République*; Léon Blum, *L'Histoire jugera*; the severe indictment of Pétain, in Francis Martel's *Pétain, De Verdun à Vichy*, by contrast with *Pétain, Les plus beaux textes* (publ. by éd. Fides, Montreal), and *Pétain*, by Général Chadebec de Lavelade (éd. de l'Arbre, Montréal); René Guenette, *La cité nouvelle* (Valiquette, Montréal); Pierre Lanux, *Têtes de pont*, etc.

Some of the arresting books relating personal experiences of soldiers and prisoners published in 1943 were: Jean Malaquais (author of *Les Javanais*—see YEAR BOOK, 1940) *Journal de guerre*, which will remind many of Barbusse's *Le Feu* (1916)—ultra-realistic, egocentric, and very cynical in the first part, but more humane when the author has measured the inhumanity of Nazism; Constantin Joffé, *Les Enterrés vivants du Stalag XVII A*, highly praised by Louis Bromfield; Pierre Mendès-France (Finance minister of the Comité de Libération in Algiers) *Liberté, Liberté chérie* and Jean Hélion, *Ils ne m'auront pas* (also publ. in English), both from the pens of escaped prisoners; Pauline Corday, *Un an à Paris sous les Boches*. Here belongs one of the most telling documents of the war, a diary written by a fanatic Nazi aviator who was shot down over London, betraying an amazingly cynical contempt for the "inferior races"; it was translated in French and published by the Maison Française, N.Y., under the title *J'étais un aviateur nazi, Journal au jour le jour*.

Poetry. A place of honor belongs here to one of the outstanding, if not the most outstanding, poets of this generation, Jules Supervielle, whose collection *Poèmes de la France malheureuse*, published in Buenos Aires (1942) was late in reaching the United States. The talented Canadian poet, Jean Charbonneau, published a sixth volume of verses on

various topics under the general title *Tel qu'en sa solitude*. In Canada also unpublished "Poems" by Jean Wahl, came out in the September issue of *La nouvelle Revue*, together with a paper by Robert Elie, "Voies nouvelles de la poésie." Another discussion of modern poetry, by Edmond Jaloux, was to be found in the new French periodical in Algeria, *Fontaine*. In the same review were three important fragments of Louis Aragon's *Cantique à Elsa*, the complete collection having been published under the title *Les yeux d'Elsa* in French Switzerland. The alert Argentine review *Lettres Françaises* published in February an issue devoted almost exclusively to poetry. A chapter on "Paul Valéry" forms part of the volume *The Heritage of Symbolism*, by C. W. Bowra (London).

Theater. Although less can be said than ever before of the French stage, it has been possible to gather from indirect sources that the Nazis were still trying hard to keep going that form of distraction from the terrible war situation. Jean-Louis Vaudoyer, a confirmed collaborator, succeeded the late Bourdet at the helm of the Comédie Française, and he did not conceal his willingness to bow before the wishes of the masters of the hour; Schiller's *Kabale und Liebe* was one of the plays produced. It became known that protests and even riots occurred and that some of the best artists were forced out. The rumor was that Dullin had taken over the Théâtre de la Cité, that Jouvet had not returned from South America after having refused the direction of the Comédie, that Baty had left the Théâtre Montparnasse. Suzanne Fournier (see *Pour la Victoire*, October 23) gave the names of eight women now in charge of well known playhouses. Gaby Morlay revived *L'Inconnue*, by Frondaie, at the Théâtre de Paris.

Plays had to avoid, as in preceding years, anything that might be construed as patriotic and the old classics were frequently resorted to: Molière, Racine, Beaumarchais. Of new plays which can be mentioned, one was hailed in Paris as a notable success, an *Euridice* by Arnouilh. However, even the controlled Nazi press seemed to agree that *La Tenue de Soirée est de rigueur* was far from a success; it is by an unknown author Paul-Alain, the message being that good comradeship may best be enjoyed in unconventional surroundings. A rehearsal was advertised of a new play by Giraudoux, *Sodome et Gomorrhe*; but in the meanwhile Giraudoux fled to Switzerland. A praiseworthy attempt at a historico-patriotic play in verse was made in Canada, by Henri Deiglun, *La France vivra*.

Novel and Short Story. If fiction was not as abundant as in normal times, it can be said that both in quality and in quantity it surpassed expectations. This was due in part to the arrangements which publishers in the United States, Canada, and South America were able to make to insure printing of prose written by authors well known in France. Here are a few stories in which the war forms a background; they are not always the best. The outstanding one came out in English (published by *Life*, Oct. 11, 1943) under the title *Silence of the Sea*; it had been published in French in a clandestine periodical *Editions de Minuit* with Vercors as the name of the author: a German officer, garrisoned in a village in France, professes a profound admiration for French culture and life and believes that both his countrymen and the French will one day meet on common ground, but he finds out on a visit to Nazi chiefs in Paris that his views are a subject of mockery by those who try to strangle France forever. Vladimir Pozner's *Les gens du pays* describes the life of a small

locality in France under the heel of the Gestapo. Ch. Megret, in *Jacques*, analyzes the case of a soldier who by a cowardly act is responsible for the life of his fellows-in-arms and finds himself in the grip of remorse. Mme. Claude Eylan, *Combat avec l'inconnue* takes the reader into a milieu of socialites indulging in intrigues while the war is going on. The easy pen of Robert Goffin produced *La colombe de la Gestapo*, while the even more inexhaustible M. Dekobra continues his series of sensational stories: *Lune de miel à Shangai*, *Le roman d'un lâche*, *Le médecin des fous*.

The following novels took little account, or none at all, of the war. The best seller, both in French and in English, was the not very long fairy story of delicate humor and of subtle although not very severe satire, *Le petit Prince* by Antoine de Saint-Exupéry. G. Duhamel printed from his series of the Pasquier *La nuit de la Saint-Jean*, and Romain Rolland offered the 22nd volume of *Les hommes de bonne volonté: Les travaux et les joies*. Fr. Mauriac in *Le mal de la femme* studied the case of the woman who married a younger man, Guy Mazeline published in Geneva and simultaneously in Montreal, *Pied d'Alouette*, the nickname given to a kindhearted old writer, the central figure in a story which covers three generations. Mme. Colette wrote *Julie de Carneilhan*. Pétiou Savain, *La case de Camballa* (in *Oeuvres nouvelles* III) told a fine story of two colored natives in Haiti. A successful story was *La jambe noire*, by Henri Ghéon, an old medieval legend of Christian inspiration, similar in theme to the American best seller *The Robe*.

Here a group of Canadian novels: Rex Desmarchais's *La Chesnaie* told the story of a sort of ambitious Canadian Hitler, descendant of the patriots of 1837. More in the present spirit of the country was Robert Charbonneau, *Ils possèdent la terre*. So was Adolphe Nantel's *La terre, roman paysan*, and Jacques Sauriol's *Le désert des lacs*. Another theme is found in Maurice Kerduff, *Joliff et Magadur, roman de mer*. Isabelle Tonacelli in *Jeunes femmes* attempts a psychology in the manner of the recent series of Montherlant, *Les jeunes filles*.

Some outstanding collections of short stories: André Maurois, *Toujours de l'inattendu*; Jules Supervielle, *Le petit bois*—witty sketches on themes suggested by ancient legends; two collections of sea stories: Roger Verceel, *Clandestine*, and Jean Merrien, *Marines*. Jules Romains had a 'Conte symbolique' in Volume III of *Oeuvres Nouvelles* (N.Y.).

Varia. In the class of Memoirs the first place belonged to Fr. Carco, *Nostalgie de Paris*; Léon Guerdan, *Je les ai tous connus*; and Gust. Cohen, *Ceux que j'ai connus*. Then, the important souvenirs by Fr. Mauriac (*Les jeux, Bordeaux, Mes plus lointains souvenirs, Commencements d'une vie, Mes premières années à Paris*), and by André Maurois, *Années d'apprentissage*, and *Années de travail*. Paul Claudel published in Geneva a little volume *Présence et prophétie*. In the domain of history: Brentano, in New York, published Typhosa Bates-Batcheller's *L'Âme d'une reine* [Louise-Marie de Gonzague, who became queen of Poland when she married Vladimir VI, in the XVII century]; André Maurois, *Histoire des États-Unis*; Robert Goffin, *De Pierre Minuit aux Roosevelt, L'épopée belge aux États-Unis*; Jean Bruchésy, *De Villa-Marie à Montréal* (the story of Jacques Cartier's city); Régina Hubert-Robert, *La Louisiane française* (Ed. Maïson Fr. N.Y.).

History of Literature and Criticism. Wallace Fowlie, *Grandeur de la pensée française* (Pascal, Péguy,

Claudel, Baudelaire, Scève . . .); Gonzague de Reynold, *Le XVII^{me} français* (Arbre, Montreal); Roger Picard, *Les salons littéraires de la société française au XVII^{me} et au XVIII^{me} siècles*; Emile Cailliet, *La tradition littéraire des Idéologues*; E. P. Shaw, *Joseph Cazotte, 1719-1792*; Roger Picard, *The roman Social*; Matthew Josephson, *Victor Hugo, a Realistic Biography of a Great Romantic* (N.Y.); Aug. Viatte, *V. Hugo et les Illuminés de son temps* (Canadian version of a French book); Marie Gilman, *Baudelaire the Critic* (Columbia Press); Gaston Gilles, *Jules Vallès, 1822-1885; ses révoltes, sa maîtrise, son prestige*, (2 vol.); Léon Daudet, *Quand vivait mon père*; Georges Reyher, *Un cœur pur*, Marguerite Audoux about the author of *Marie-Claire*, a best seller of 1910; Pierre Brodin, *Maîtres et témoins de l'Entre-deux-guerres*, a continuation of the 1942 volume, treating Péguy, Bernanos, Maurois, Morand, etc. Two important volumes of essays were J. Giraudoux *Littérature* (Racine, Laclous, Nerval, etc.) and A. Rousseau, *Le monde classique* (Homère, Corneille, Chateaubriand, etc.).

Personalities. The death, for lack of proper food, has been announced of Louis Gillet, of the French Academy, early in July. Together with this news, came a belated report that the Fr. Academy had awarded, several months before, a prize to Pierre Lecomte du Nouÿ, for a very successful work *L'Avenir de l'esprit*—a counterpart to Renan's *L'Avenir de la Science*, published half a century earlier. Jean de la Varende was elected to replace L. Daudet as a member of the Académie Goncourt. The founder of the Théâtre libre, and later director of the Odéon for eight years, Antoine, died in Brest at 85. Contradictory reports were circulated about Romain Rolland's fate, and the same was true of Herriot.

See NECROLOGY under Schinz, Albert.

ALBERT SCHINZ.

FRENCH OCEANIA. The French possessions in the eastern Pacific, comprising several groups of islands. The principal groups are: Society, Marquesas, Tuamotu, Leeward (Iles sous le Vent), Gambier, Austral, and Rapa islands. Clipperton, an island 670 miles southwest of Mexico has been included in French Oceania. Tahiti (600 sq. mi.; pop. 19,029 in 1936), of the Society group, is the main island. Total area, 1,520 square miles. Total population (Jan. 1, 1938), 45,000. Capital: Papeete (on Tahiti), 8,456 inhabitants, Copra, vanilla beans, phosphate (160,680 tons exported in 1939), and mother-of-pearl are the chief products. Trade (1939): imports 80,482,000 francs; exports 63,536,000 francs (franc averaged \$0.0251 for 1939). Budget (1939): 27,560,000 francs. The Government is under the control of a governor, assisted by a private council and an assembly of financial and economic delegations. Governor, Colonel Orselli.

FRENCH SOMALILAND. A French colony in Africa, at the southern entrance to the Red Sea. Area, 8,492 square miles; population (1936 census), 44,240, including 27,380 Somalis, 4,200 Arabs, 12,000 Danakils. Chief towns: Djibouti (Jibuti), the capital, 20,000 inhabitants in 1939; Obock, Tajura, Gueherne, Galamo, Gobad.

Production and Trade. The chief occupations of the people were fishing, salt mining (85,000 tons, 1937), and the transit of goods to and from the interior. Trade (1938): imports 147,700,000 francs (the chief imports were textiles, cattle, coal, and sugar); exports 85,300,000 francs (the main exports were coffee, hides, and salt). The 1938 transit

trade was valued at 521,563,195 francs (franc averaged \$0.0288 for 1938; \$0.0251 for 1939). Shipping entered at Djibouti in 1938 totaled 2,823,096 tons. There is a railway from Djibouti to Addis Ababa, Ethiopia, 496 miles in length.

Government. Local budget (1939): 26,000,000 francs. The government is administered by a governor, assisted by an administrative council. On Dec. 29, 1942, it repudiated the Vichy Government in France and adhered to the Fighting French National Committee. Governor, André Bayardelle (appointed Dec. 29, 1942).

History. Measures of monetary reform in an endeavor to prevent serious inflation were established in French Somaliland on Feb. 18, 1943. The value of the franc was set at 176.625 francs to the £ sterling, the same rate as for French Cameroun, French Equatorial Africa, New Caledonia, etc. Based on the current exchange of the £ sterling, the franc was equal to \$0.0288.

FRENCH SUDAN. See FRENCH WEST AFRICA.

FRENCH TOGO. See TOGO, FRENCH.

FRENCH WEST AFRICA. A French colonial federation made up of the colonies shown in the accompanying table.

Colony	Sq. mi.	Pop. (1937)	Capital
Dahomey.....	43,232	1,289,128	Porto-Novo
Dakar ^a	60	126,929	Dakar
French Guinea.....	96,886	2,065,527	Conakry
French Sudan.....	590,966	3,635,073	Bamako
Ivory Coast.....	184,174	3,981,459	Abidjan
Mauritania.....	323,310	370,764	.....^b
Niger.....	499,410	1,809,576	Niamey
Senegal.....	77,730	1,666,374	St. Louis

French West Africa.. 1,815,768 14,944,830^c Dakar

^a Including dependencies. ^b The lieutenant governor of Mauritania resides in St. Louis, Senegal. ^c The total population included 26,614 Europeans, of whom 18,188 were French.

Chief towns: Dakar (capital), 42,000 inhabitants; Kaolak, 39,981; St. Louis, 35,927; Porto-Novo, 27,483; Bamako, 32,761 (1940), Abidjan, 26,143; Thiès, 18,915; Bobo-Dioulasso, 18,589; Ouagadougou, 16,595; Kayes, 15,894 (1940). Education (1937-38): 514 schools and 68,310 pupils.

Production and Trade. The principal agricultural products are groundnuts, maize, rice, palm kernels and oil, cottonseed, coffee, cotton, tobacco, sesame, and cacao. Gold output for 1939 amounted to 129,889 troy oz. Trade (1938): imports 1,627,200,000 francs (textiles, fuel oil, machinery, foodstuffs, and beverages were the chief items); exports 1,416,100,000 francs (groundnuts, cacao, gold, palm oil, timber, coffee, fruits, and gum were the important items). The franc averaged \$0.0288 for 1938; \$0.0251 for 1939.

Communications. In 1938 there were 2,453 route miles of railways, 21,457 miles of telegraph line, and 8,314 miles of telephone line. Highways totaled 33,565 miles in 1940.

Finance. The financial estimates for 1938 totaled 1,126,264,486 francs (made up of general budget 335,000,000 francs, local budgets 498,162,000 francs, supplementary budgets 293,102,486 francs). General budget for 1939 balanced at 349,000,000 francs.

Government. The whole federation of French West Africa was placed under the general control of a governor general, assisted by a council. All the colonies, including the circumscription of Dakar, are each administered by a governor subject to the Governor General at Dakar. Governor General Pierre Boisson, a Vichy appointee, switched his allegiance to Adm. François Darlan's provisional

regime at Algiers on Nov. 23, 1942. For developments in 1943 see below.

History. As described in the 1943 YEAR BOOK, the adhesion to the Giraud regime in Algiers of Governor General Pierre Boisson of French West Africa had ended Allied fears that the Germans would obtain control of Dakar. There they would have been in a position to attack the adjoining British and Fighting French colonies and Liberia, to disrupt the American and British air ferry service across the waist of Africa that ran through those territories, to attack Allied shipping in the South Atlantic, and to threaten an invasion of Brazil.

The anxieties aroused on the latter score were indicated by the joint declaration issued by President Roosevelt and President Vargas of Brazil at Natal on Jan. 29, 1943. They agreed that the coast of West Africa and Dakar should "never again under any circumstances be allowed to become" an invasion threat to the two Americas. However, statements by responsible observers early in 1943 confirmed Governor General Boisson's claim that he had never permitted German or Italian infiltration in Dakar or any other part of French West Africa. See "The Mystery of Dakar: An Enigma Resolved," *Foreign Service Journal*, April, 1943, by Thomas C. Wasson, U.S. Consul at Dakar from September, 1940, to February, 1942.

With the cooperation of the French authorities, U.S. naval and air activities at Dakar were greatly expanded during 1943, under the direction of Adm. William Glassford. On May 26 President Roosevelt appointed Glassford as his personal representative, with the rank of Minister, in French West Africa. The Admiral headed an American mission at Dakar charged with coordinating and supervising U.S. activities throughout that area. Pressure from General de Gaulle and his anti-Vichy supporters forced Boisson to resign as Governor General at the end of June. Pierre Cournarie, de Gaullist Governor General of French Cameroun, was appointed to succeed him by the French Committee of National Liberation at Algiers.

See ALGERIA, BRAZIL, and FRANCE under *History*.

FRENCH WEST INDIES. See GUADELOUPE and MARTINIQUE.

FRIENDLY ISLANDS (Tonga). See TONGA.

FRIENDS, Society of (Quakers). A religious society founded in England by George Fox (1624-90) which stresses the direct spiritual guidance of the Holy Ghost, called the Inner Light, repudiates war, a paid ministry, and the outward observance of the sacraments or any religious ritual. There are four denominations in the United States, of which the Society of Friends (Orthodox) is the oldest and largest, and the Religious Society of Friends (Hicksites) a liberal group, is equally active. Orthodox headquarters, Richmond, Ind. For statistics see RELIGIOUS ORGANIZATIONS.

FROZEN FOODS. See AGRICULTURAL COOPERATION; REFRIGERATION.

FRUITS. See HORTICULTURE; INSECT PESTS.

FSA. Federal Security Agency (q.v.) or Farm Security Administration (see AGRICULTURE, U.S. DEPARTMENT OF).

FTC. See FEDERAL TRADE COMMISSION.

FUEL, FUEL OIL. See COAL; ELECTRIC LIGHT AND POWER; GAS INDUSTRY; HEATING; LIVING COSTS; MINES, BUREAU OF; NATIONAL BUREAU OF STANDARDS. PETROLEUM; WAR PRODUCTION BOARD under *Conservation*. For *Liquid Fuel*, see COAL, CHEMISTRY under *Petroleum Gases*; MINES, BUREAU OF.

FULBRIGHT RESOLUTION. See UNITED STATES under *Postwar*.

FURNITURE. See BUILDING MATERIALS under *Lumber*; WAR PRODUCTION BOARD under *Simplification and Standardization*; LIVING COSTS.

FURS, FUR PRODUCTION. See ALASKA; FASHION EVENTS; FISH AND WILDLIFE SERVICE.

FUTUNA AND ALOFI. See NEW CALEDONIA.

FWA. See FEDERAL WORKS AGENCY.

GABON. See FRENCH EQUATORIAL AFRICA.

GALÁPAGOS ISLANDS. See ECUADOR, under *Area and Population*.

GALLATIN COLLECTION. See ART under *Art Museums*.

GAMBIA. A British colony and protectorate in West Africa, occupying each bank of the Gambia River for a distance of 300 miles from the coast. Total area, 4,068 square miles; total population (1940 estimate), 205,000, as against (1931 census) 199,520. Capital, Bathurst, where resided most of the 14,370 inhabitants of the island of St. Mary. Education (December, 1941): 11 schools for primary and secondary education and 1,858 students.

Production and Trade. The chief products are groundnuts (35,000 tons estimated for 1942), palm kernels, hides, skins, and beeswax. Crops grown for local consumption included rice, maize, guinea corn, cassava, and cotton. Trade, including specie (1941): imports £563,303 (cotton piece goods, rice, non-edible oils, bags and sacks, kola nuts, tobacco, and sugar); exports £290,087 (groundnuts and palm kernels). Shipping (1941): 281 vessels (445,244 tons) entered and cleared.

Government. Finance (1941): revenue £247,197; expenditure £208,453. Public debt (Dec. 31, 1941) £38,760. The area of the colony (Bathurst, Georgetown, and some adjacent land) is 69 square miles, but by an ordinance enacted in 1902, all Gambia except the island of St. Mary (4 sq. mi.) was placed under the protectorate system. In the protectorate there are 4 provinces each administered by a commissioner, responsible to the Governor who controls the whole country. There is an executive council of 4 members who assist the Governor, and a legislative council for the colony (consisting of 10 members over which the Governor presides) which has power to legislate for the protectorate. Governor and Commander in Chief, Hilary Blood (appointed Dec. 24, 1941).

GAMBIER ISLANDS. See FRENCH OCEANIA.

GARBAGE AND RUBBISH DISPOSAL. See SANITATION. **GARMENT INDUSTRY.** See FASHION EVENTS; TEXTILES. Compare LIVING COSTS.

GAS INDUSTRY. Despite severe shortages of materials and manpower the year 1943 was one of marked achievement in the gas industry. While essential civilian services in the home and elsewhere were maintained, facilities were expanded to increase the output of gas fuel needed by industry to meet every requirement of the war emergency without curtailment of supply.

At the end of the year 19,450,000 customers were being served with gas; for the second successive year a record number in the history of the industry. Of this total, manufactured and mixed gas companies served 10,696,000 customers while 8,754,000 were served by natural gas companies. Revenues of the entire industry, both manufactured and natural, aggregated \$1,071,850,000, an increase of 7.8 per cent over 1942. Of this, \$633,195,000 was grossed by natural gas companies, while the manufactured gas companies

grossed \$438,655,000. Total sales of natural gas for 1943 amounted to 1,983,687,000 M cu. ft., an increase of 12.5 per cent over 1942. The Statistical Department of the American Gas Association estimated the total production of natural gas in 1943 at 3,250,000,000 M cu. ft., an increase of 61,916,000 M cu. ft. over the preceding year.

PRELIMINARY ESTIMATES ON THE NATURAL GAS INDUSTRY FOR 1943

Customers	1943	1942	Change %
Domestic (Incl. House Heating).....	8,118,000	7,893,000	+2.9
Commercial.....	584,000	572,000	+2.1
Industrial.....	52,000	51,000	+2.0
Total.....	8,754,000	8,516,000	+2.8
Gas Sales (MCF)			
Domestic (Incl. House Heating).....	505,488,000	476,426,000	+6.1
Commercial.....	163,699,000	152,562,000	+7.3
Industrial.....	1,019,617,000	906,059,000	+12.5
Electric Generation.....	294,683,000	232,767,000	+26.6
Total Ind. & Elec. Gen.....	1,314,300,000	1,138,828,000	+15.4
Total.....	1,983,487,000	1,767,814,000	+12.2
Revenue (Dollars)			
Domestic (Incl. House Heating).....	\$330,702,000	\$315,255,000	+4.9
Commercial.....	66,675,000	64,545,000	+3.3
Ind. & Elec. Gen.....	235,818,000	203,790,000	+15.7
Total.....	\$633,195,000	\$583,590,000	+8.5

Statistical Department, American Gas Association.

The outstanding achievement of the year was the development and production by the Testing and Research Laboratories of the American Gas Association of two vital life-saving devices for the Army Air Forces. One is an automatic oxygen regulator which feeds oxygen to fliers in the amount required as altitude is gained. The other device is an oxygen therapeutic set used in the air transport of sick and wounded personnel.

PRELIMINARY ESTIMATES ON THE MANUFACTURED GAS INDUSTRY FOR 1943

Customers	1943	1942	Change %
Domestic.....	9,838,000	9,722,000	+1.2
House Heating.....	419,000	396,000	+5.8
Commercial.....	395,000	407,000	-2.9
Industrial.....	34,000	34,000	0.0
Miscellaneous.....	10,000	10,000	.....
Total.....	10,696,000	10,569,000	+1.2
Gas Sales (MCF)			
Domestic.....	214,941,000	204,511,000	+5.1
House Heating.....	88,741,000	79,092,000	+12.2
Commercial.....	57,086,000	59,034,000	-3.3
Industrial.....	116,968,000	94,261,000	+24.1
Miscellaneous.....	4,036,000	3,479,000	+16.3
Total.....	481,772,000	440,377,000	+9.4
Revenue (Dollars)			
Domestic.....	\$279,787,000	\$266,972,000	+4.8
House Heating.....	57,108,000	51,218,000	+11.5
Commercial.....	49,606,000	50,413,000	-1.6
Industrial.....	49,854,000	40,111,000	+24.3
Miscellaneous.....	2,300,000	2,012,000	+14.3
Total.....	\$438,655,000	\$410,726,000	+6.8

Statistical Department, American Gas Association.

The study for postwar production of residential gas appliances and industrial equipment was accelerated during the year by some 400 per cent. Research was undertaken in the field of natural gas as a chemical raw material, and promising discoveries were made which will aid in the war emergency and also in postwar problems. Progress was made in the industrial application of radiant gas heat to baking, curing, and drying operations in many fields. Gas fuel now performs a dual service in the two important processes required in the production of enormous quantities of magnesium essential in the building of war weapons.

See AQUEDUCTS; CHEMISTRY under *Petroleum Gases*; HEATING; MINES, BUREAU OF; PETROLEUM ADMINISTRATION FOR WAR; WAR PRODUCTION BOARD under *Conservation*. For rate-making, see

FEDERAL POWER COMMISSION; LAW under *Supervision of Federal Agencies*.

GASOLINE. See PETROLEUM.

GAS WARFARE. See BOMBS; CIVILIAN DEFENSE, OFFICE OF.

GENERAL ACCOUNTING OFFICE. An agency of the U.S. Government, created independently of the other agencies, to secure the uniform settlement and adjustment of all claims and accounts in which the United States is concerned. Comptroller General of the United States in 1943: Lindsay C. Warren.

GENERAL EDUCATION BOARD, The. An institution incorporated by act of Congress in 1903, with the stated object of promoting education within the United States of America without distinction of race, sex, or creed. The present program of the board is restricted almost entirely to the support of educational work in the Southern States.

The Board is empowered to spend the income and the principal of its funds. During the year 1943 it appropriated approximately \$2,573,000. Among the larger grants were: \$160,000 to Meharry Medical College, Nashville, Tenn., toward expenses of the Medical School and Hospital; \$158,000 to Virginia Union University, Richmond, to complete construction and equipment of a library and auditorium; \$70,000 to Dillard University, New Orleans, La., toward support of the Division of Nursing; \$50,000 to Morris Brown College for rehabilitation of grounds and building; \$38,000 to Fisk University, Nashville, Tenn., primarily for expenses of teaching and research; \$50,000 to the University of Florida, Gainesville, toward support of studies in nutrition through related basic studies in animal nutrition, soils, and horticulture; \$36,000 to the Association of Colleges and Secondary Schools for Negroes, in support of its secondary school study; \$29,000 to Alabama Polytechnic Institute, Auburn, for research on pasture and forage crops, and \$25,000 to the same institution for a forestry research project; \$28,630 to the Medical College of Virginia, Richmond, toward support of a study of nursing education; \$27,500 to Southwestern, Memphis, Tenn., toward support of its expanded Music Department; \$25,000 to Tulane University of Louisiana, New Orleans, toward support of the School of Social Work; \$25,000 to the University of Georgia, Athens, for use in its library; \$21,400 to the State Department of Education in Georgia toward support of a cooperative State program in teacher education; \$20,420 to the University of Kentucky, Lexington, toward support of research in rural population changes in Kentucky; \$20,000 to the University of Alabama for the use of its Bureau of Public Administration; \$20,000 to The Williamsburg Public Schools, Williamsburg, Va., toward support of the Bruton Heights School, established to provide better educational opportunities for Negroes in the vicinity of Williamsburg; \$15,000 to the National Urban League, Inc., New York City, toward support of a southern field office and field program.

The executive officers during 1943 were Walter W. Stewart, chairman of the board of trustees; Raymond B. Fosdick, president; Albert R. Mann, vice-president and director; William W. Brierley, secretary; Edward Robinson, treasurer; George J. Beal, comptroller; Thomas M. Debevoise, counsel; Chauncey Belknap and Vanderbilt Webb, associate counsels. Offices: 49 West Forty-ninth St., New York City, N.Y.

GENERAL LAND OFFICE. An Office of the U.S. Department of the Interior which supervises the survey, management, and disposition of the public lands and the minerals therein. At present the Office is making large tracts of land available for military uses. Commissioner in 1943: Fred W. Johnson.

GENERAL SCHEDULING ORDER. See WAR PRODUCTION BOARD under *Balanced Production*.

GEOGRAPHICAL NAMES, U.S. Board on. A branch of the U.S. Department of the Interior, successor to the U.S. Geographic Board, which is the official authority on the use of geographic names by the Government. Director in 1943: Meredith F. Burrill.

GEOLOGICAL SURVEY, U.S. Shoulder to shoulder with other governmental agencies speeding the war program, the Geological Survey in 1943 eclipsed its previous records of accomplishment in the fields of science and engineering. In every State of the Union and its Territories specialists carried on their investigations and surveys, but their activities extended far beyond territorial boundaries. Mexico and other American Republics were visited in the search for minerals needed for war, and in some instances Survey geologists went ashore with the first landing troops in quest of water for the fighting men. States and their political subdivisions and other Federal agencies contributed about six of the 11 million dollars that was made available to the Geological Survey in 1943, a notable year for cooperative effort. Field examinations of mineral deposits and mining districts numbered more than 700; about 4,000 war reports relating to water were submitted; and approximately 20,000 square miles of strategic areas in the United States proper were covered by surveys for topographic or planimetric maps. Alaska, once a vulnerable outpost, also was the scene of much activity in the way of geologic investigation and topographic mapping.

Numerous investigations of deposits of deficient minerals were conducted jointly with the Bureau of Mines. In an outstanding example of this joint work, the Survey continued the vanadium investigations, particularly those of the Colorado Plateau and Idaho-Wyoming deposits, estimating the reserves of ore and initiating drilling programs in geologically-favorable areas. With the view to further coordinating the Survey's work with that of the Bureau of Mines, regional offices were established at Salt Lake City, Utah, Spokane, Wash., Rolla, Mo., and College Park, Md. Furnishing the necessary geologic information, the Survey recommended to the Bureau the exploration of numerous chromite deposits in California, Montana, Oregon, and Georgia. Sufficient reserves were shown in the more than 100 deposits examined in those States to justify the erection of mills that were soon producing at least 90 per cent of the domestic chrome.

Continuing the mapping of the Arkansas bauxite district, the Survey recommended extensive exploration. About 20 areas were drilled on the Survey's advice, resulting in the discovery of deposits of $3\frac{1}{2}$ million tons of bauxite ore more than 8 feet thick and containing more than 32 per cent of valuable alumina. Success also crowned the Survey's work on the bauxite-bearing beds of the Coastal Plain of Tennessee, Mississippi, Alabama, and Georgia. Drilling as proposed by the Survey revealed nearly a million tons of commercial ore. Tungsten, manganese, and mercury also claimed

a good share of the geologists' attention during the year. Detailed records of the history, geology, etc., of all known manganese deposits, mines, and prospects in the United States were completed, as were studies of the mineral in California, eastern Tennessee, and the Batesville district, Arkansas. Studies of manganese were continued in active areas in 18 other States. Most of the western States and several eastern States were the scene of tungsten examinations, with more than 200 individual deposits having been studied. At the end of the year most of the more important mercury-producing areas had been mapped in detail, and as a result new ore reserves, notably at New Idria, Calif., were made known and the Survey had a working basis for exploration and development elsewhere. The pressing needs of the steel industry directed attention to a number of projects involving iron-ore supplies. Deposits were examined in 22 States, particular attention being given to locating accessible reserves of low phosphorus ores. Search was also made for additional deposits of coking coal suitable for western steel plants, and some studies were completed of areas that seemed likely to yield promptly additional supplies of oil, and progress has been made in investigations of numerous other such areas. Information on additional resources of helium resulted from a survey in cooperation with the Bureau of Mines.

The Geological Survey was actively engaged on 37 geologic projects in Alaska, much of this work being done at the request of and with funds transferred from the War Production Board. Included in the program were investigations of antimony ores, iron, chromium, mercury, nickel-copper, tin, copper, molybdenum, tungsten, zinc, and barium. These investigations took the Survey specialists to southeastern Alaska, Prince William Sound-Copper River region, Cook Inlet-Alaska Railroad region, Kuskokwim region, and western Yukon-Seward Peninsula region.

Sponsored largely by the Department of State and by the Board of Economic Warfare, geologic work in the other American Republics continued with gratifying results. In Brazil it concerned nickel, beryl, and mica; in Argentina, tungsten, beryl, and tantalum; in Colombia, quartz, mica, molybdenum, copper, and mercury; in Panama, manganese; in Cuba, chromite, manganese, copper, and zinc; in Venezuela, mica, quartz, and nickel; and in Mexico, tungsten, manganese, antimony, fluorspar, mercury, and molybdenum. Explorations in Mexico resulted in (1) a notable increase in mercury production in the largest producing district and (2) the discovery of a district that promised to be an active and significant producer of tungsten. Work in Cuba also contributed to the year's geologic lore in revealing considerable reserves of chromite. Aluminum ores in a novel environment were discovered in the Caribbean area, and a reconnaissance of that region was ordered in the hope of finding other deposits of similar magnitude and grade.

In the field of topographic mapping the Survey's work in the United States centered on areas of strategic importance, as selected by the War Department. For the many new areas designated as strategic, an unprecedented amount of transit traverse was required in order to establish control. Maps of the regions were produced largely from aerial photographs in the Survey's offices in Washington, D.C., and in the field offices at Clarendon, Va., Chattanooga, Tenn., Rolla, Mo., and Sacramento, Calif. In the main office at Clarendon large

production facilities were operated on a two-shift basis, and a central laboratory was maintained for designing, testing, repairing, and adjusting all types of special optical and mechanical equipment utilized for stereophotogrammetric work. There, too, a photographic laboratory specialized in research and precision photography required for field offices. Cooperative mapping projects were conducted in 17 States and in Puerto Rico, as well as with the Tennessee Valley Authority, and work was continued on the Transportation Map of the United States, 68 sheets of which have been prepared for publication. Reconnaissance surveys were made of two areas in Alaska not theretofore adequately surveyed. The compilation of aeronautical piloting maps for the Army Air Forces—an office project on which the services of more than 250 employees were engaged—was continued.

Every State and Hawaii cooperated in the Survey's all-important work in hydrology and hydraulic engineering. Such cooperation generally takes the form of agreements to pay 50 per cent of the cost of water-resources investigations. The War and Navy Departments and a dozen other Federal agencies supplied the funds for such investigations as could not be financed by the Geological Survey or included in cooperative programs. Contributions of the States and funds transferred from other Federal agencies amounted to about 57 per cent of the funds provided for water-resources investigations, an indication of the high esteem in which this work is held. The several thousand war reports mentioned at the outset dealt with the quantity and chemical quality of available water, information that was essential to the building of cantonments, naval stations, military hospitals, air fields, and the like for direct use of the armed forces and of munitions industries, hydraulic and steam power plants, etc., on the home front. Both surface and underground waters were covered by the reports. Records of stage, quantity, or availability of surface waters were collected at about 5,000 gaging stations; periodic measurements of water levels or artesian pressure were made in about 7,000 observation wells; more than 8,000 chemical analyses of water samples were made in the several laboratories of the Survey, in Washington, D.C., and elsewhere; and a variety of hydrologic and hydraulic studies and compilations were made on the utilization and control of streams, the monthly summary of stream-flow and ground-water conditions throughout the United States and Canada being published in the *Water Resources Review*.

As consultant and adviser in geology to other Federal agencies, the Survey acted upon 7,900 mineral-classification cases involving from one to many geologic determinations. In furtherance of the work, geologic investigations were made of coal, oil, and gas in Colorado, Montana, New Mexico, Oklahoma, South Dakota, Utah, and Wyoming, and of geologic conditions at one dam site in Washington. This and its mineral-leasing activities went far toward increasing the contribution of public-land resources to the war program. Supervision was given to operations for the development of power and the production of minerals, including oil, gas, coal, potash, sodium, lead, and zinc from public lands, Indian lands, and naval petroleum reserves. At the close of the fiscal year there were more than 5,000 public-land properties under supervision. Notable in this connection was the discovery and development of helium-bearing natural gas on the Navajo lands in New Mexico.

The Geological Survey published more than 2,000,000 copies of maps and reports in 1943, and distributed about 1,000,000 copies. Approximately half a million maps were delivered to the War Department. See **PHOTOGRAPHY**.

THOMAS B. NOLAN.

GEOLOGY. See **GEOLOGICAL SURVEY**; **MINES, BUREAU OF**; articles on minerals.

GEORGIA. A south Atlantic State. Area: 58,876 sq. mi. Population: 3,123,723 (1940 census); 3,015,336 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. **AGRICULTURE**; **MINERAL PRODUCTION**; **ROADS AND STREETS**; **SCHOOLS**; **SOCIAL SECURITY BOARD**; **TAXATION**; **UNIVERSITIES**; and **VITAL STATISTICS**. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article **ELECTIONS IN THE UNITED STATES**; also, for incumbents, **HOUSE OF REPRESENTATIVES** and **SENATE**.

Legislation. See the separate article on **STATE LEGISLATION**.

Officers. The Governor is Ellis G. Arnall (Dem.), inaugurated in January, 1943, for a four-year term; Secretary of State, John B. Wilson; Attorney General, T. Grady Head.

See **PRISONS**; **STATE LEGISLATION** under *State Government and Employees*.

GEORGIAN SOVIET SOCIALIST REPUBLIC. See **UNION OF SOVIET SOCIALIST REPUBLICS** under *Area and Population*.

GERMAN-AMERICAN BUND. See **LAW**.

GERMANY. A former Federal republic of Europe, transformed into a centralized, totalitarian state by the National Socialist revolution commencing in 1933. Capital, Berlin.

Area and Population. The area and population of Germany and its political subdivisions at the census of May 17, 1939, with comparative figures for the census of 1933, are shown in Table I.

Table II shows the area and population of territories formally incorporated into the Reich but not included in the May 17, 1939, census. Other

I. GERMANY: AREA AND POPULATION BY POLITICAL SUBDIVISIONS

Subdivisions	Area sq. miles	Population June 16, 1933	Population May 17, 1939
Prussia ^a	113,012	39,934,011	41,655,252
Bavaria.....	29,336	7,681,584	8,222,982
Württemberg.....	7,530	2,896,234	2,896,920
Mecklenburg ^b	6,197	805,213	900,413
Baden.....	5,817	2,411,462	2,502,442
Saxony.....	5,785	5,196,652	5,231,739
Thuringia.....	4,540	1,659,510	1,743,624
Hesse.....	2,969	1,429,048	1,469,215
Oldenburg.....	2,480	573,853	577,648
Brunswick.....	1,417	512,989	583,338
Anhalt.....	893	364,415	431,422
Saarland.....	738	812,030	842,454
Lippe.....	469	175,538	187,220
Hamburg.....	160	1,218,447	1,711,877
Schaumburg-Lippe.....	131	49,955	53,195
Bremen.....	99	371,558	450,084
Total.....	181,688	66,030,491	69,459,825
Austria ^c	34,055	.....	6,972,269
Sudetenland ^d	8,718	.....	2,943,187
German Reich.....	224,461	.....	79,375,281

^a Excluding Saarland and including Waldeck and Lüneburg.
^b Excluding Saarland. ^c Annexed Mar. 13, 1938. ^d Annexed Oct. 1, 1938.

territories occupied by German forces as of Jan. 1, 1943, are shown in Table III. Approximately 490,000 German-speaking inhabitants from the occupied territories and other parts of Eastern Europe were transferred to Germany up to March, 1941, as follows: From the Baltic States, 121,500; Poland, 158,300; Rumania, 195,000; Bulgaria, 14,000. For the most part, these migrants were settled in the

II. OTHER NEWLY ANNEXED TERRITORIES

Territory	Date of annexation	Area sq. miles	1939 Population
Memel.....	Mar. 22, 1939	1,092	155,000
Danzig.....	Sept. 1, 1939	754	391,000
German Poland.....	Oct. 8, 1939	35,512	10,043,000
Eupen Moresnet	May 19, 1940	386	69,000
Alsace-Lorraine..	Nov.-Dec., 1940	5,605	1,915,627 ^b
Luxembourg....	Aug. 30, 1942	999	301,000
Northern Slovenia.....	Oct. 1, 1942	?	?
Total.....		44,348	12,874,627

^a Annexed from Belgium. ^b 1936 census. ^c Annexed from Yugoslavia.

provinces annexed from Poland, displacing 1,500,000 to 2,000,000 Poles who were deported to Germany proper or to the Government General of Poland. An additional 66,000 German-speaking inhabitants of the Italian Tyrol were transferred to Austria and other districts of Greater Germany up to March, 1941, under the German-Italian agreement of Dec. 21, 1939 (see 1939 YEAR BOOK, p. 388). According to the 1939 census, there were 330,892 Jews and 72,733 half-Jews in Germany, Austria and Sudetenland. By Dec. 31, 1941, this number had been reduced to about 200,000; further deportations of Jews, mainly to the Government General of Poland, took place during 1942-43.

The rates for living births and non-military deaths per 1,000 inhabitants for Greater Germany (including Austria, Sudetenland, Danzig, and Memel) were as follows during 1938-42:

	1938	1939	1940	1941	1942
Births.....	19.0	20.4	20.4	18.8	15.2
Deaths.....	12.0	12.6	13.0	12.3	12.1

Populations of the chief cities at the May 17, 1939, census were: Berlin, 4,332,242; Vienna, 1,918,462; Hamburg, 1,682,220; Munich, 828,325; Cologne, 768,426; Leipzig, 701,606; Essen, 659,871; Dresden, 625,174; Breslau, 615,006; Frankfurt-on-Main, 546,649; Düsseldorf, 539,905; Dortmund, 537,000; Hanover, 472,527; Stuttgart, 459,538; Duisburg-Hamborn, 431,256; Nuremberg, 430,851; Wuppertal, 398,099; Königsberg, 368,433; Bremen, 342,113; Chemnitz, 334,563; Magdeburg, 334,358; Gelsenkirchen, 313,003; Bochum, 303,288; Mannheim, 283,801; Kiel, 272,311; Stettin, 268,915; Halle-on-Saale, 220,364; Kassel, 217,085; Graz, 210,175; Brunswick, 201,306.

Education. Primary education is compulsory and there is little illiteracy. Excluding Austria and the Sudetenland, there were 50,592 elementary schools and 7,503,195 pupils in 1939, as compared with 51,118 schools and 7,596,000 students in 1938. In Austria there were 4,721 schools and 657,000 pupils; in the Sudetenland, 2,957 schools and 274,000 pupils. Other school enrollment (in 1937-38) was: Intermediate, 272,365; "gymnasien" and "realschulen," 370,985; universities and advanced schools, 69,981 (universities, 45,989; advanced technical schools, 9,554; others, 14,438). There are three special colleges for the training of Nazi political leaders.

Religion. According to the 1933 census, 62.7 per cent of the German people were Protestants affiliated with the various Evangelical Churches, 32.5 per cent were Roman Catholics, 0.7 per cent were Jews, and 4.0 per cent professed other religious faiths. Beginning in 1934 the Hitler Government undertook to unite the Evangelical churches under a bishop appointed by the Reichsfuehrer, and

III. OCCUPIED TERRITORIES

Territory	Date of occupation	Area sq. miles	Estimated population
Bohemia-Moravia.....	Mar. 15, 1939	19,058 ^b	7,380,000 ^{bc}
Poland.....	Sept., 1939	114,733 ^d	25,412,000 ^d
Denmark.....	Apr. 9, 1940	16,576 ^e	3,837,000 ^e
Norway.....	Apr. 9, 1940	124,556	2,952,000 ^f
Netherlands....	May 10-15, 1940	13,515	8,923,000 ^g
Belgium.....	May 10-28, 1940	11,775	8,295,000 ^h
France.....	June 22, 1940	212,722	39,300,000 ⁱ
Yugoslavia.....	Apr. 6-13, 1941	95,576 ^{jk}	15,920,000 ^{lk}
Greece.....	Apr. 6-30, 1941	50,147 ^{lm}	7,201,000 ^{lm}
Russia.....	June 22, 1941		
Total.....	Sept. 1, 1942	480,000	56,000,000
Total.....		1,138,658	175,220,000

^a Protectorate, under German civil administration. ^b Excluding the Sudetenland. ^c Jan. 1, 1940; excluding German armed forces and German citizens who moved to Bohemia-Moravia after Mar. 15, 1939. ^d Not including areas annexed to the Reich (see Table II) and 225 sq. miles with 45,000 inhabitants transferred from Poland to Slovakia by the German-Slovak treaty of Nov. 21, 1939. Of the total "occupied area," the Government-General of Poland (under German civil administration) comprised about 77,444 sq. miles with some 19,807,000 inhabitants. The remaining 34,000 sq. miles of Polish territory, with a 1939 population of about 4,800,000, was under German military occupation and formed part of the Ostland. ^e Excluding the Faeroe Islands. ^f June 30, 1941. ^g Occupation was completed June 10, 1940. ^h Jan. 1, 1941. ⁱ Date of Franco-German armistice. ^j Estimate for area of prewar France, Apr. 1, 1941. ^k Of this original area, Berlin retained military control over Serbia (area, 36,937 sq. miles) and part of the Banat. It placed a part of northwestern Slovenia under German civil administration preliminary to annexation, which became effective Oct. 1, 1942. The remainder of Yugoslavia was partitioned among Italy, Hungary, Bulgaria, and the puppet states of Albania and Montenegro. See YUGOSLAVIA. ^l The Germans retained military control of only parts of conquered Greece, placing the remainder under Bulgarian and Italian rule. See GREECE. ^m As of Jan. 1, 1940. ⁿ Including the Baltic States. ^o Up to Sept. 1, 1942.

made other efforts to coordinate the policies of the Evangelical and Catholic churches with the policies of the Nazi party and state. This provoked a serious conflict (see YEAR BOOKS for 1933-43). The Government also sponsored a neo-pagan German National Church based on doctrines of the official Nazi party philosopher, Alfred Rosenberg, but it gained relatively few adherents. According to statistics issued by the Reich Ministry of Church Affairs in 1941, there were 45,000 Evangelical pastors and other church functionaries excluding Austria and the Sudetenland, 9,300 Evangelical church establishments with 72,000 employees, 33,000 Roman Catholic priests, and 8,650 Catholic religious centers with over 100,000 monks and nuns. The number of school children belonging to Evangelical churches was 4,353,435; to the Catholic Church, 2,803,138.

Production. According to German statistics based on the 1939 census, there were on that date 39,792,000 gainfully employed persons in Germany (including the Saar, Austria, and Sudetenland but excluding Memel), an increase of 29.6 per cent since 1933. Of the employed population, 41.5 per cent were engaged in industry and handicraft, 27.3 per cent in agriculture and forestry, 17.2 per cent in commercial service, 10.2 per cent in public service, and 3.8 per cent in household service. Before the end of 1943 large numbers of employed Germans were absorbed by the armed forces, their places being taken by some 6,000,000 foreign workers and war prisoners (see below under History).

The national income, estimated at 80 billion reichsmarks in 1938, was reported by the German Finance Minister to be 110 to 115 billions in 1941.

The gross value of farm production in the harvest year 1938-39 was 14,050,000,000 reichsmarks. Estimated production of potatoes in Greater Germany was 58,900,000 tons in 1940 (including Austria and Sudetenland); sugar beets, 18,400,000 tons. Yields of chief cereals in 1939 were (in metric tons): Wheat, 5,613,500; barley, 4,261,800; rye, 9,454,800; oats, 6,867,700; and corn, 379,600 (1938). In 1940 Germany devoted 918,840 acres to rapeseed, flax, and hemp. Meat production in 1938 totaled 3,676,800 metric tons, of which hogs accounted for 2,305,600 metric tons. The livestock census of December, 1939, showed 19,900,000 cattle, 25,200,000 swine, 4,900,000 sheep, 3,442,741 horses (1938), and 2,300,000 goats. The 1939 wool clip was about 20,500 metric tons. Forests, covering 42,796,000 acres, were an important adjunct of the German economy. German sea fisheries in 1938 caught 722,000 metric tons of fish valued at 104,200,000 reichsmarks.

No official figures on mineral and metallurgical production were published after 1938. The U.S. Bureau of Mines estimated the 1940 output of Germany and Austria as follows (in metric tons): Coal, 450,000,000; iron ore, 15,000,000; pig iron, 22,000,000; nickel, 600; copper, 36,000; zinc, 220,000; lead, 190,000; antimony, 180; bauxite, 20,000; aluminum, 240,000; magnesium, 25,000; mercury, 65; petroleum and substitutes, 26,263,000 bbl. Early in 1942 Germany's capacity for producing synthetic petroleum, lubricating oils, and other motor fuels was estimated at 5,200,000 metric tons. The total synthetic and natural oil production under Axis control was placed at slightly more than 12,000,000 tons. Rayon production of Germany and Austria in 1940 was about 80,000 metric tons; wood pulp, 2,927,000 tons in 1939. As one of the world's three leading industrial nations, Germany produces a wide variety of other manufactures. Arms and other war production monopolized an increasing share of its productive facilities after 1933. In 1942 about 80 per cent of all industrial production was estimated to be for war purposes.

Foreign Trade. No statistics have been published since the outbreak of the World War. For prewar figures, see 1942 YEAR BOOK.

Finance. Publication of a regular budget was discontinued in 1934. According to the Minister of Finance, the public revenues rose from 80 billion marks in 1938-39 to between 110 and 115 billions in the year ended Mar. 31, 1942. Budget operations for the years 1938-39 to 1942-43 were shown in part as follows in the League of Nations' *Monthly Bulletin of Statistics* for August, 1943.

GERMAN BUDGET OPERATIONS
(In millions of marks)

Years ended Mar. 31	Receipts ^a	Expenditures ^b	Public debt ^c
1938-39.....	17,691	28,529	44,639
1939-40.....	23,575	44,648	78,278
1940-41.....	27,221	64,810	127,283
1941-42.....	32,258	83,930	184,445
1942-43 ^d	35,000	90,607	214,680

^a Excluding war contributions of local authorities, net receipts from public enterprises (3-4 billions yearly), and occupation costs from occupied countries. ^b Total of tax receipts and net borrowings. ^c End of calendar years 1939, 1940, 1941, 1942, and June 30, 1943. ^d Estimates.

The figures given in the table show only part of the total governmental receipts and expenditures. Total war expenditures for the fiscal year 1941-42

were estimated by one authority at about 100 billion marks, of which 52 billions were obtained by internal borrowing, 32 billions by taxation, 6 billions from other internal revenue, and 10 billions from occupation costs levied on conquered countries. An additional 7 billion marks was borrowed in conquered countries from banks, through unpaid clearing balances, and from other sources.

Reichsbank currency notes in circulation increased from 11,798 million marks on Dec. 31, 1939, to 25,375 billions on Dec. 31, 1942, and 26,650 billions on June 30, 1943. At the official exchange rate, 2.50 reichsmarks were equivalent to \$1.00 in 1942. The nominal average rate for the reichsmark remained at about \$0.40 during the period 1938-43.

Transportation. The total railway mileage in Germany and German-occupied countries was 109,904 (excluding occupied France) on Dec. 31, 1940, compared with 86,000 miles on Oct. 1, 1939 (about 42,300 miles in Germany proper). Extensive construction of strategic railways was carried on in Russia and other occupied territories during 1941-43. Partly through territorial annexations, the German highway network increased from 132,094 on Mar. 31, 1937, to 263,267 miles in 1940, including over 2,000 miles of express highways. The length of German air services in operation on Oct. 22, 1940, was officially reported as 7,457 route miles. The Deutsche Lufthansa A.G. was reported in August, 1941, to be operating about two-fifths of the lines in service prior to the war.

Inland waterways extend more than 7,000 miles (canals, 1,450 miles). Further extensions to the canal system were under construction in 1941-43, including the Oder-Danube and Rhine-Main-Danube canals. As of June 30, 1939, the German merchant marine comprised 2,466 ships of 4,492,708 gross tons. A large part of this fleet was subsequently lost through enemy action or requisitioned by neutral governments.

Government. Under the Enabling Act of Mar. 24, 1933, giving the cabinet unrestricted powers to legislate by decree, dictatorial powers were assumed by Adolf Hitler in his dual capacity as Chancellor (appointed Jan. 30, 1933) and head of the National Socialist (Nazi) party, the only legal political organization. Upon the death of President von Hindenburg, Aug. 2, 1934, Hitler assumed the functions of both Chancellor and President under the title of Leader (Fuehrer) and Chancellor (Reichskanzler). On Oct. 16, 1934, it was officially announced that Hitler would occupy both offices for life. On Apr. 26, 1942, the Reichstag approved a decree empowering the Fuehrer, without recourse to legislation, "to compel every German . . . by all means he deems suitable to fulfill his duty, and, in the event of his neglecting his duty, duly to punish him . . . without regard to so-called duly acquired right, and especially to relieve him of his rank or office without instituting the prescribed proceedings."

Rights of the former Federal States were abolished by the decree of Feb. 1, 1934. Between 1933 and 1943, the Nazi party progressively brought under its control not only the government and the army but virtually all departments of political, cultural, social, and economic life (see preceding YEAR BOOKS). The Reichstag of 855 members was elected Mar. 29, 1936, and Apr. 10 and Dec. 4, 1938, from nominees selected by the Nazi party. The addition of new members to represent newly annexed territories increased the total to 873 by July, 1940. It was a purely advisory body, meeting infrequently at the call of the Fuehrer. By a decree

issued Jan. 29, 1943, the life of the Reichstag—elected in 1938 was prolonged until Jan. 30, 1947.

Hitler administered Germany through a Cabinet of 19 members. For the Cabinet list at the beginning of 1943 and the date of appointment of each member, see the 1943 YEAR BOOK under *Government*. For changes during 1943, see below under *History*. Local administrative authority was divided between the Statthalters (Governors) of the 17 former Federal States (Länder), who were under the direct control of the Minister of Interior, and the Gauleiters, or Nazi party chiefs, of the 42 party districts into which the country was divided. The decree of Dec. 11, 1942, made each party district a Reich Defense Area and vested the Gauleiters with the authority of Reich Defense Commissioners.

On Aug. 30, 1939, Hitler named an Inner Council of Defense consisting of Marshal Goering (chairman), Rudolf Hess, Ministers Frick, Funk, and Lammers, and Gen. Wilhelm Keitel, chief of the general staff. The Council was authorized, in the event of Hitler's absence, to issue decrees and ordinances without his signature. In a speech to the Reichstag on Sept. 1, 1939, Hitler designated Marshal Goering as his successor "if anything should happen to me in this struggle." He named Rudolph Hess as Goering's successor. After Hess's imprisonment in Britain, Hitler on Feb. 15, 1942, named Richard Bohrmann to be second in line of succession. For developments in 1943, see below.

HISTORY

Trend of the War. The military and diplomatic events of 1943 confirmed the worst fears aroused in Germany by the costly setbacks of 1942 (see 1943 YEAR BOOK). The Red Army followed up its smashing victory at Stalingrad with continuous great offensives that wrested from Hitler's grasp some two-thirds of the Russian territories conquered at such heavy cost in 1941 and 1942. The German submarine campaign was conclusively defeated, paving the way for a large-scale Anglo-American invasion effort in Western Europe in 1944.

British and American air raids, rising to a new pitch of effectiveness and intensity, desolated the cities of western and central Germany. These raids seriously hamstrung German war production, burdened the nation with the care of hundreds of thousands of homeless, destitute, and demoralized civilians, and forced the German High Command to use a large proportion of its fighter planes defensively in northwestern Europe. Meanwhile Allied forces in North Africa defeated and captured a German-Italian army of some 200,000 men in Tunisia. They successfully invaded Sicily and the Italian mainland, forced Italy out of the war, and gained effective control of the Mediterranean.

These events shook to its foundations the formidable edifice of German power. The conviction that Germany faced inevitable defeat, barring unforeseen developments, spread throughout the Axis world. Finland, Bulgaria, Hungary, Rumania, and the other Axis satellites intensified their efforts to escape involvement in the impending German collapse. The Franco Government in Spain substituted neutrality for its openly pro-Axis policy of nonbelligerency. Bolivia, Colombia, Iran, and Portugal hastened to board the Allied bandwagon. Turkey prepared to do so at the opportune moment. Chile severed diplomatic relations with the Axis Powers, aligning all of the 21 American republics except Argentina on the side of the United Nations. Sweden became more aggressively de-

fiant in rejecting German pressure for collaboration with the Axis cause. Revolt and underground warfare spread among the German-occupied countries.

Climaxing this ominous encirclement and undermining of Hitler's "European fortress" was the agreement concluded by American, British, and Soviet war leaders at the Tehran Conference in December for closer collaboration in pushing the war to an early conclusion (see UNITED NATIONS). The conference virtually ended German expectations of a breach between Communist Russia and the Anglo-American democracies that would enable the Third Reich to avert unconditional surrender.

By the end of 1943 Germany had suffered an estimated 2,500,000 military deaths, as compared with 1,773,700 in World War I. The German homeland, which emerged virtually unscathed from the physical destruction of the first World War, was already the scene of vast devastation. Toward the year's end Allied air bases were established in Italy and western Russia. They brought the hitherto relatively untouched cities of eastern and southern Germany within bombing range.

The German people were fatigued and dispirited by more than four years of total war following upon seven years of feverish preparation for war. Their huge blood sacrifice, the surrender of their liberties to Nazi totalitarianism, and the expenditure of over \$100,000,000,000 for war purposes since 1933 had gained them only the prospect of a worse defeat than in 1918.

Nevertheless Hitler still had formidable military power at his disposal. Rallying his fanatical followers for a last-ditch fight against enemies at home and abroad, he ordered the ruthless extermination of defeatists and critics. At the same time Nazi propaganda dinned into all ears a warning of the terrible fate that awaited a defeated Germany at the hands of the Allies. Under this twin threat, the German armies and people fought doggedly on into the climactic year of the war—1944.

Nazism on Defensive. The long succession of stunning defeats inflicted upon German arms on land, sea, and air between November, 1942, and December, 1943, brought an enormous loss of prestige to the Nazi party, leaders, and government. It aggravated the conflict between the party and the army leaders, initiated a gradual process of disintegration within the party, and spurred growing numbers of Germans to turn away from Hitler and his associates in search of more effective leadership.

A defensive note entirely foreign to his usual confident forecasts of victory was struck by Hitler on January 1 in a New Year's message to the German people, issued from his headquarters in Russia. He warned that severe hardships lay ahead during 1943, but declared that Germany would never consider capitulation and would fight on against all obstacles to "a definite victory." He emphasized that "the surest guarantor for the strength of will necessary for the completion of this task is the National Socialist party."

The tenth anniversary of Hitler's accession to power on Jan. 30, 1943, coincided with Berlin's admission of the loss of some 330,000 men and 17 generals in a Russian trap sprung on the German and Rumanian forces besieging Stalingrad. For the first time since 1933 Hitler failed to appear at the Nazi party celebration of the anniversary. But his proclamation warning the German people that they faced enslavement to bolshevism unless they fought on to the end was read by Propaganda Minister Goebbels. Goebbels and Reich Marshal

Hermann Goering, in a broadcast that was twice interrupted by the attacks of British Mosquito bombers, undertook to explain the reasons for the German reverses in Russia. Goering frankly admitted that Germany had greatly underestimated Russian military power.

Emergency Decrees. The Nazi leaders seized upon the apprehension aroused by the debacle at Stalingrad to spur the home front to greater efforts. The Propaganda Ministry on February 3 decreed three days of national mourning for the "Stalingrad defenders." Under the slogan, "total mobilization of the national resources for total war," the Government issued emergency decrees closing all businesses, shops, and offices not directly essential to the war effort in order to release additional manpower for the army and war industries. The decrees overnight reduced the bulk of the German middle class to the status of proletarians. They imposed additional sacrifice and hardship upon every German man and woman.

These decrees were accepted by many Germans as necessary under the circumstances. But the doubts and passive resistance which they aroused were plainly reflected in the Propaganda Ministry's persistent efforts to reassure the dispossessed middle class. Dr. Goebbels repeatedly proclaimed that the emergency measures were essential to avert defeat, that they were of a strictly temporary nature, and that those affected would be restored to their former economic and social status at the end of the war.

The skepticism with which these assurances were received was, not unnaturally, increased by Hitler's speech at the Nazi Heroes' Day ceremonies in Berlin on March 21. He declared that the Nazi state after the war would press forward untiringly with its program for the elimination of all class differences and "the establishment of a true Socialist community." This occasion marked Hitler's first public appearance in Germany since the preceding November. It served to end a flood of rumors alleging that he had been deposed by the army generals or had suffered a nervous breakdown. The Fuehrer explained that the celebration had been postponed for a week to allow time for overcoming the military crisis in Russia. He declared the Russian front had now been stabilized and that "we have taken measures that will obtain success for us in the months ahead until final victory is achieved."

Like his promise of 1942 that Stalingrad would be taken and held against all comers, this new prediction was not fulfilled. There followed in quick succession the disaster in Tunisia, the virtual obliteration of many cities in western Germany from the air, and the failure of the German summer offensive in Russia. Meanwhile Hitler had returned to his Russian headquarters after his March appearance in Berlin, leaving home-front affairs to his Nazi associates. On April 15 the German news agency D.N.B. sent out a correction ordering editors to eliminate reference to Hitler as "supreme commander of the armed forces" from a previous dispatch. This tended to confirm reports that Hitler had been forced to delegate his powers as supreme military commander to his army generals. On May 15 the German radio announced that Hitler had signed a decree extending indefinitely the dictatorial powers conferred upon him by the Reichstag on Mar. 24, 1933.

Cabinet Reorganized. The overthrow of Mussolini in Italy, the loss of Kharkov in Russia, and the rapid deterioration of home front morale under the punishing Anglo-American air raids led the

first week in August to an emergency conference of Nazi political and military leaders at Hitler's general headquarters.

The conference was followed on August 24 by a reorganization of Hitler's Cabinet, in which Heinrich Himmler, while retaining control of the Gestapo and Elite Guard, was appointed Minister of Interior and Chief of the Reich Administration. The hated organizer of Nazi terrorism was thus made master of the home front, except for the control of labor which Hitler assumed personally. Himmler was also designated as second in line (after Goering) to succeed Hitler in the event of the latter's death or incapacitation. Dr. Wilhelm Frick was shifted from the Interior Ministry to replace Baron Constantin von Neurath as Reich Protector of Bohemia and Moravia, but retained a place in the Cabinet. The Himmler appointment was received as a grim warning of the fate awaiting defeatists and noncollaborationists within the Nazi party and the nation.

Growing internal tension was further indicated by the agitation of some Nazi extremists for a purge of lukewarm elements within the party. Some reshuffling of lower party officials took place, but nothing resembling the "blood purge" of 1934. Baldur von Schirach, Gauleiter of Vienna and former Hitler Youth leader, was reported to have fled to Switzerland when accused of consorting with "reactionaries" and anti-party elements. Viktor Lutze, Chief of Staff of Hitler's Storm Troops, who died May 2 of injuries sustained in an automobile accident, was succeeded on August 18 by Gen. Wilhelm Schepmann, Nazi party veteran and chief of the Storm Troops in Saxony.

Bolstering the Home Front. On October 8 Hitler again called home-front leaders to his headquarters for a conference designed to bolster German morale and spur war production. Hitler, Himmler, Armaments Minister Speer, and Admiral Doenitz, commander in chief of the navy, addressed the gathering on steps needed to assure final victory. Himmler issued the significant warning that "isolated cases" of defeatism would be "eradicated without mercy," while Hitler called upon Nazi leaders to stiffen the will power and perseverance of the German people.

A communiqué issued from Hitler's headquarters on October 19 announced that another conference of the highest German military and political authorities had been held for the purpose of overhauling war strategy and methods. Field Marshal Gen. Wilhelm Keitel, chief of the high Command, first called in the highest commanders of the naval, air, and land forces and the chiefs of the German defense districts for a discussion of military problems. Then followed a conference to map out political strategy.

These conferences were accompanied by appeals from Nazi political and military leaders reassuring the German people and urging them to stand fast during the coming winter. Meanwhile Himmler extended his measures to root out disaffection. "Complete subjugation to the will of the Government" was demanded of all Germans on pain of severe punishment or death. Himmler also was reported to have extended his control over military formations on German soil, apparently a move to reduce the growing possibility of an anti-Nazi military coup.

Hitler issued new threats of death to "cowards" and "criminals" at home in a speech at Munich on November 8 on the 20th anniversary of the Nazi party's Munich beer hall putsch. Germany's whole destiny and future, he declared, depended on "marshalling the last reserves of strength so we

can force a decision in our favor." Promising to exact retribution from Britain for the RAF raids, he declared that "if the German people despair, they will deserve no better than they get." The British answer to this threat was the great raids of late November and December on Berlin, which reportedly forced the Government to move most of its administrative machinery to Breslau and other less exposed centers.

Growth of Opposition. Numerous reports emanating from Germany during the year indicated that opposition to the Nazi regime was becoming more widespread and more violent than at any time since 1933. A Swedish correspondent in Berlin reported February 4 that sham window shows in Berlin shops had been banned by the authorities following the smashing of numerous windows by irritated crowds. The secret police were said to have arrested 34 officers at the Military Academy in Charlottenburg on February 25 in one of a series of raids seemingly designed to block a monarchist or rightist coup. About the same time a dozen or more Germans, including several officials, were reported to have been hung for treason. Three students at Munich University were guillotined the same month for distributing anti-Nazi tracts.

The Stockholm correspondent of *The New York Times* on April 4 reported that the railway bridge across the Oder River at Frankfurt had been blown up and bombs exploded in two Berlin railway stations in a wave of sabotage. He also declared that 40 Nazi party members had been executed by the Gestapo for a conspiracy aimed either at Goebbels or Himmler. Among numerous individuals allegedly jailed for "obstructing the war effort" were Dr. Hans Luther, former Reich Chancellor and German Ambassador to the United States.

In April Berlin confirmed news that five more anti-Nazi conspirators had been executed in Munich and 12 others jailed for printing and distributing tracts calling on the population to sabotage war industries. Most of these conspirators were youths. Apparently the anti-Nazi movement in Munich was related to the growing tension between Nazi authorities and Catholic students in the university towns and cities of southern Germany.

The fall of Mussolini, announced in the Reich July 26, precipitated anti-Nazi and anti-war manifestations among Italian and German workmen in Berlin. During the last four months of the year notices of executions of "defeatists" appeared with increasing frequency in the German press. Any criticism of the Government and the Nazi party or any expression of doubt as to the possibility of a German victory exposed the offender to the death penalty. Swedish newspapers reported in mid-November that a new Nazi decree made children of 12 years (instead of 16) subject to the death penalty. The reign of terror was applied with particular ruthlessness to foreign workers in Germany. But notwithstanding all efforts at repression, competent Swiss and Swedish observers in the Reich reported that pessimism and defiance were spreading widely among the German people.

Nazi-Church Conflict. The war crisis merely served to intensify the long-standing conflict between the Nazi regime and the Christian churches. On May 12 the Office of War Information in Washington made public the text of a memorial sent to the Nazi Minister of Church Affairs, Dr. Bernhard Rust, on Dec. 18, 1942, by the Catholic bishops of Germany. The memorial attacked in the strong-

est terms the Nazi war on religion. It deplored the Nazi policies in the occupied countries that were creating "ramparts of bitterness and enmity" toward Germany and the Germans. For the text of this important document, see *The New York Times*, May 13, 1943.

The Lenten pastoral letter of the Bishops of Cologne and Paderborn contained another outspoken protest against "the introduction of force" to increase both legitimate and illegitimate births. The Fulda Conference of German Catholic bishops in August issued another vigorous denunciation of the Nazi persecution of religion. This attitude was reflected in the growth of anti-Nazi political activities among the Catholic population of southern Germany. The Nazis responded by eliminating the remnants of the Catholic press, extending seizures of Church properties, disbanding more Catholic lay organizations, and removing religious emblems and images from the schools. Hundreds of priests and laymen were thrown into concentration camps for anti-Nazi political activity.

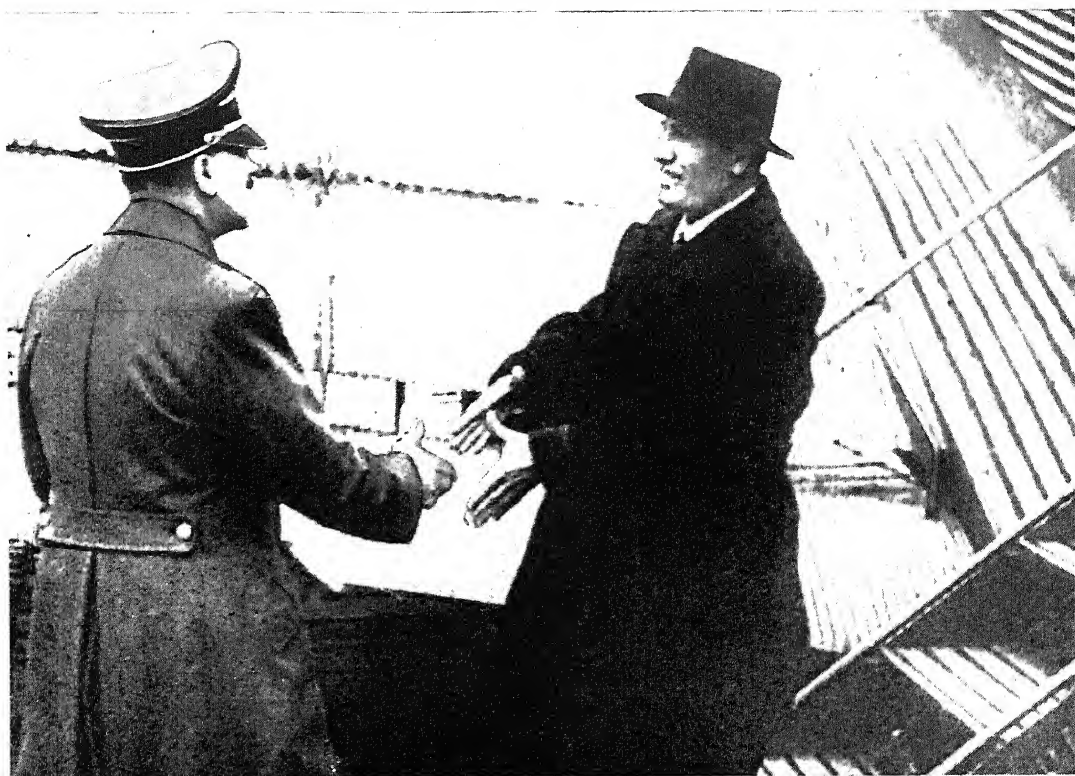
According to a report distributed by the Religious News Service from a reliable Scandinavian source, the Protestant churches in Germany likewise continued to oppose Nazi racial doctrines and ideology despite persistent efforts to divide and weaken them. Early in August the organ of the Swiss Protestant churches reported the imprisonment of a number of German pastors for describing the Allied bombing of German cities as "just retribution for the suffering imposed by Germany on other peoples."

Decline of Armed Forces. German armed forces at the end of 1943 were still waging stubborn, skillful, and effective warfare against the United Nations forces on all fronts. A U.S. Army Intelligence Service report issued November 11 disclosed that the German High Command had at its disposal 300 well-trained divisions, including 60 new divisions created, reformed, or reequipped during 1943. This was three times as many combat divisions as Germany had in the field when she attacked Poland in 1939.

However many of these divisions were not at full strength. They included the screenings of men of all classes from 17 to 60 years of age, many of whom had been previously rejected for military service. They also included considerable numbers of conscripts from the German-occupied countries, many of whom seized the first opportunity to desert. Military observers reported a marked decline in the striking power of German front-line divisions as compared with the elite units of 1939-41.

The morale of German ground units showed a slight but not a crucial decline, according to reports from various fronts and from the occupied countries. On the other hand the deterioration of the German air force was marked on all fronts. While larger than in 1939, and still dangerous, the Luftwaffe repeatedly proved unable to provide cover for German ground forces on the Russian and Mediterranean fronts. Nor was it able to check the growing Anglo-American air power based on Britain. Reich Marshal Goering was reliably reported to have been forced to relinquish actual command of the Luftwaffe to Field Marshal Erhard Milch.

The German navy, which was the first to mutiny in 1918, displayed a much more precarious state of morale than either the army or air force. On January 30 it was announced that Adm. Erich Raeder had been replaced as commander in chief of German naval forces by Adm. Karl Doenitz, the



CAPTAINS AND KINGS DEPART

Above: Mussolini, alleged to have been "liberated" from prison by German paratroopers after his downfall, is greeted by Hitler upon arriving in German territory. (Press Association)
Below: The funeral of Boris, Bulgarian monarch, was marked by a great show of German esteem to bolster the sagging support of Bulgaria. (Photo by Office of War Information)



награда
од
100.000
РАЈХСМАРАКА У ЗЛАТУ!

100.000 РАЈХСМАРАКА У ЗЛАТУ ДОБИЋЕ ОНАЈ КОЈИ
ДОВЕДЕ ЖИВА ИЛИ МРТВА ВОЂУ БАНДИ
ДРАЖУ МИХАЈЛОВИЋА.

Овај значајан бачио је земљу у
изрећу несреће. Опуштеном од раз-
вратног живота, уобразио је он да је по-
рзан да „ослободи“ народ. Као енглески
плаћеник, овај смелни хвалисавци није
ништа друго радило већ утирало пут болше-
визму и тиме помогао да се униште сав
национална добра која су нареду од вај-
када била висока и света. Он је тиме по-
речио мир сељака и грађанина, упропа-
стио мањине, довео па и живот хиљада
људи, а земљу бацио у неоправдану беду и
чезању

СТОГА ЈЕ ОВАЈ ОПАСНИ БАН-
ДИТ У ЗЕМЉИ УШЕЋЕН СА 100.000
РАЈХСМАРАКА У ЗЛАТУ.

Онај који докаже да је овог значајног
учесника безбедности или га прова најбли-
жеј немачкој власти на само што ће до-
бити награду од 100.000 Рајхсмарака у
злату, него ће тиме извршити и једно на-
ционално дело, јер ће ослободити народ и
отдаљити од баче немачког крвавог
тирора

Врховни заповедник

Нове мере против бандитизма



награда
од
100.000
РАЈХСМАРАКА У ЗЛАТУ!

100.000 РАЈХСМАРАКА У ЗЛАТУ ДОБИЋЕ ОНАЈ КОЈИ ДО-
ВЕДЕ ЖИВА ИЛИ МРТВА КОМУНИСТИЧКОГ ВОЂУ ТИТА.

Овај значајан бачио је земљу у не-
срећу несреће. Као комунистички агент, нај-
српачије цркви, манастира и другим раз-
важним стварима да обуставе у земљи социјет-
ску револуцију, а и тиме је уобразио да је
он позван да „ослободи“ народ. За овако-
релог титиста циља он се огревао у циничким
грађанским рату и у Совјетској Унији, где
је узнео ово терористичко штакло
(ГПУ-а, петого опортунистичког културно и
интелигентног унашћивања јудских за-
вета)

Ова његова „ослободилачка агитација“,
која је широм да утрле пут болшевизму,
тим најгрознијом комунистичком режиму на
свету, изградила је мањине, добро па и жи-
вот

вет хиљадама људи. Овај је сави парони-
ста ивот спалио и грађанство и бацио
земљу у економску беду и невољу. Пору-
шени цркви и спалили села трогом су
најмање је он прорачунао.

СТОГА ЈЕ ОВАЈ ОПАСНИ БАН-
ДИТ У ЗЕМЉИ УШЕЋЕН СА 100.000
РАЈХСМАРАКА У ЗЛАТУ

Онај који докаже да је овог зна-
чајног учесника безбедности или га прова
најближеј немачкој власти на само што
ће добити награду од 100.000 Рајхсма-
рака у злату, него ће тиме извршити и
једно национално дело, јер ће ослобо-
дити народ и отаџбину од баче болшевиз-
мског крвавог тирора.

Врховни заповедник
немачких трупа у Србији



Press Association and (top) I.N.P.

REVOLT AGAINST AXIS RULE

Above: Wanted dead or alive—by Hitler—Generals Draža Mihailovitch (left) and Josip Broz (Tito), leaders of Yugoslav guerrillas fighting German domination. Below: A batch of German prisoners are marched through a mountain hamlet by their Yugoslav captors.

former commander of the submarine fleet. Under Doenitz the German subs made a renewed effort to sever Anglo-American sea communications. The failure of this effort was demonstrated by a Churchill-Roosevelt statement of August 14 announcing that U-boats had been sunk at the average rate of one a day during May, June, and July.

Rear Adm. Francis S. Low, director of the U.S. Navy's anti-submarine warfare, stated on September 28 that the German navy was nearing demoralization and had been forced to draft submarine crews. According to Swedish reports, there were mutinies and other evidences of declining discipline among German submarine crews stationed in Norway. The crews of three German capital ships based on Alten Fjord, Norway, reportedly attempted to sabotage the vessels upon receiving news of the surrender of the Italian fleet.

The continued enmity and undercover struggle for power between Hitler and his Nazi associates on the one hand and the nonparty professional army officers on the other contributed to the deterioration of morale in the armed forces. Hitler's relations with his non-Nazi commanders remained a subject of intense speculation. He was apparently induced to relinquish actual direction of the Russian campaign early in 1943. But in July and again in October, he was reliably reported to have intervened to change the plans of the High Command in Russia, with the customary disastrous results.

From time to time there were further reports of the replacement of nonparty professional commanders with Nazi generals. In mid-December Field Marshal Gen. Erwin Rommel was said to have been placed in charge of German defenses in western Europe. At the same time it was reported that Gen. Richard Jungklaus, a Nazi officer, would succeed Baron Alexander von Falkenhausen as German military commander in Belgium.

To add to the complexity of the military situation, there were repeated threats from Nazi officials to retaliate for Anglo-American "terror raids" by introducing devastating new weapons of warfare. Indications that the Germans were preparing to resort to gas warfare led President Roosevelt on June 8 to warn that a gas attack upon any of the United Nations would "immediately be followed by the fullest possible retaliation. . . ." In December it was reported from Switzerland that the Germans were preparing to bombard London from the French coast with powerful, long-range rockets.

War of Propaganda. As the fortunes of war turned steadily against the Axis, the Hitler regime intensified its propagandist efforts to bring about a split between Russia and the Anglo-American powers. The danger that bolshevism would overrun Europe if the German armies were defeated was emphasized in every speech of the Nazi leaders and in daily radio broadcasts to all parts of the world. At the same time Berlin sought to deepen Moscow's suspicions of its capitalist allies. This propaganda was accompanied by repeated undercover efforts to conclude a separate peace with either Russia or with Britain and the United States, which would enable the Third Reich to retain most of its newly conquered empire. Late in November it was reported that Franz von Papen, the German ambassador to Turkey, was in Rome seeking to enlist the aid of the Vatican in peace negotiations.

A major objective of the strategy behind the great German withdrawal in Russia was to facilitate a falling out between Russia and her allies

over the future conduct of the war and the conditions of the peace. It was to prevent this that the conference of British, American, and Soviet Foreign Ministers was held in Moscow early in November and that the Stalin-Churchill-Roosevelt meeting followed in Tehran in December. The success of these conferences in reaching agreement upon the major war and postwar issues in dispute among the three great Allied powers appeared to have sealed Germany's doom.

Economic Mobilization. Nazi Germany's last hope of survival now lay in prolonging the war and staving off invasion of the Reich until war weariness among the Allies presented an opportunity for a compromise peace. To make this possible the Nazis worked with feverish intensity to mobilize all military and economic resources of Germany and the occupied countries. The number of workers employed in war industries in German-dominated territories increased from 23,000,000 at the outbreak of the war to an estimated 35,000,000 in November, 1943. In the Reich alone there were more than 28,000,000; of these over 12,000,000 were foreign workmen who had been conscripted or who had volunteered for labor in German factories.

Wholesale conscription of manpower in the occupied countries and the extension of labor conscription to German women enabled the Nazis to channel the great majority of physically fit German men into the armed forces. The economic and financial resources of Germany and the occupied countries were enlisted in the war effort with equally ruthless efficiency. According to the British Ministry of Economic Warfare, the Germans up to Sept. 30, 1943, had plundered \$18,000,000,000 from the occupied countries in occupation costs and forced exports paid in blocked paper marks which could not be taken out of Germany. This was exclusive of goods of all kinds that were confiscated or stolen and sent to Germany. As a result war production remained high despite the dislocations and destruction wrought by Allied air raids.

The German food rations in the winter of 1943-44, while poor in quality, were higher in caloric content than at the outbreak of hostilities. On the other hand there were many evidences of the intense strain upon the civilian population imposed by total mobilization, further extension of working hours, the elimination of vacations, and the growing scarcity of all kinds of consumer goods. On July 22 Berlin dispatches announced the modification of the economic mobilization decrees of January 27 and 29 to permit the reopening of many closed retail shops.

Atrocities. While economic mobilization was speeded, the Hitler regime broadened and intensified its program of terrorism and extermination in the occupied countries, with the object of curbing sabotage, forestalling revolt, and permanently weakening the enslaved nations. The Inter-Allied Information Committee in London on February 27 estimated that nearly 3,400,000 persons had been executed or had died in prisons in nine German-occupied countries up to the end of 1942. In an official incomplete account of Axis war crimes in occupied Europe published August 26, the Committee stated that Germany and its satellites were carrying out at an increasing tempo a deliberate program of wholesale theft, murder, torture, and savagery. It charged that this was part of a premeditated plan to liquidate entire peoples.

At Hitler's personal instigation, the Jews, Poles, and Russians bore the brunt of the campaign of extermination. Deportations of Jews were speeded

up from Western Europe to the Government General of Poland, which had been converted into a veritable slaughter pen by the Nazis. The Nazi anti-Jewish program was introduced into Denmark for the first time, over the strenuous protests of the Danish population. It was placed in more widespread operation in all of the other German-occupied and satellite countries. According to a report issued in New York August 26 by the Institute of Jewish Affairs of the American Jewish Congress and World Jewish Congress, more than 3,000,000 European Jews had been destroyed by planned starvation, forced labor, deportations, and methodical massacres since the beginning of the war.

Rallying the Axis. In addition to the foregoing efforts, the Nazi regime sought to rally its Axis partners in support of a unified and more vigorous prosecution of the war. Early in the year repeated appeals were made to Tokyo for a Siberian diversion to relieve Russian pressure upon Axis armies in Europe, but without success. The second week in April Mussolini during a four-day conference at Hitler's headquarters appealed for more German guns and planes to defend Italy against invasion from North Africa. But German aid proved insufficient to prevent the overthrow of Hitler's principal Axis associate on July 25, and the capitulation of the Badoglio Government to General Eisenhower early in September. Then came the declaration of war against Germany by the Italian Government on October 13.

The collapse and surrender of the Italians, branded as a cowardly betrayal by Berlin newspapers, was a body blow to Germany from both a military and psychological standpoint, although it relieved some of the economic strain that support of the Italian war effort had imposed on the Reich. By occupying Rome and the Vatican City, replacing Italian garrisons in the Balkans and Mediterranean islands, freeing Mussolini from his anti-Fascist captors, and holding the Allies at bay in southern Italy, the Germans managed to salvage something from the Italian debacle. Mussolini's proclamation of a "Republican Fascist Government" under German auspices restored some semblance of the defunct Rome-Berlin Axis. It enabled the Propaganda Ministry in Berlin to celebrate the third anniversary of the signing of the Tripartite Pact with Italy and Japan on September 27 by broadcasting assurances from Mussolini and the Japanese Foreign Minister that the Axis alliance remained unbroken.

Mussolini's role, however, was now that of a mere puppet, valuable only for propaganda purposes. On December 11, the second anniversary of the German and Italian war declarations against the United States and of the German-Italian-Japanese agreement not to sign a separate peace, Mussolini joined Foreign Minister von Ribbentrop in broadcasts designed to bolster confidence in Germany's military position. The same three powers had signed an agreement for economic cooperation on January 20 and an agreement on war and post-war politico-military collaboration on March 22.

There was a steady procession of leaders of the smaller Axis powers to Hitler's headquarters in April, and some of them were recalled several times during the remainder of the year. But the Fuehrer's demands for larger contributions of troops and supplies to the Axis war effort met with greater resistance than in previous years. Bulgaria, Hungary, and Rumania, in particular, demanded greater guarantees in their trade negotiations with the Reich and increased the prices of their products

to compensate for the hard terms exacted by the Germans earlier in the war. All of the German satellite countries reduced their military contributions. Only the threat of German military occupation prevented most of them from withdrawing from the struggle.

See ALBANIA, ARGENTINA, BELGIUM, BOHEMIA AND MORAVIA, BRAZIL, BULGARIA, CHILE, CORSICA, COSTA RICA, DENMARK, FINLAND, FRANCE, GREAT BRITAIN, GREECE, GUATEMALA, HUNGARY, IRAQ, ITALY, JAPAN, LITHUANIA, NETHERLANDS, NORWAY, PERU, POLAND, PORTUGAL, RUMANIA, SPAIN, SWEDEN, SWITZERLAND, TURKEY, and YUGOSLAVIA, under *History*; AERONAUTICS; BIRTH CONTROL; CHEMISTRY under *Foreign*; LABOR CONDITIONS; NAVAL PROGRESS; NEWSPAPERS; THEATER; UNITED NATIONS.

RONALD STUART KAIN.

GESTAPO. See GERMANY, the German-occupied countries, BULGARIA, HUNGARY, ITALY, RUMANIA, and YUGOSLAVIA, under *History*.

GIBRALTAR. A British crown colony and fortified naval base at the western entrance to the Mediterranean. It comprises a long mountain called the "Rock" which has an extreme height of 1,396 feet. A canal, 20 feet wide, built across the isthmus as a wartime safety precaution, now separates Gibraltar from the mainland. There is a deep-water Admiralty harbor with an area of 440 acres, containing three graving docks. Area, 1 $\frac{7}{8}$ square miles. Total fixed population (Jan. 1, 1939), 20,339, of whom 16,000 were evacuated to Great Britain, Madeira, and Jamaica because of the danger of heavy casualties in case of heavy attacks from the air.

Trade. Gibraltar, a free port and tourist resort during peacetime, does an extensive shipping trade. The chief occupations of the people were the supply of fuel and provisions to shipping and the transit of cargoes to Spain and Morocco. Shipping (1938): 4,752 ships (13,772,321 tons) cleared.

Government. Chief sources of revenue are the port dues, rent of the Crown estate in the town, and duties on wine, tobacco, spirits, beer, gasoline, and perfumery. In 1938 revenue totaled £207,628 and expenditure £199,725. The Governor is assisted in the administration by an executive council of seven members. There is no legislative council, the power to legislate being vested in the Governor who, in addition, is the general officer commanding the garrison. Governor and Commander in Chief, Gen. F. N. M. MacFarlane (appointed May 30, 1942).

History. On Aug. 30, 1943, the Supreme Court of Gibraltar sentenced to death Luis Lopez Cuenca of La Linea, Spain, charged with the possession of a German bomb intended to blow up the ammunition tunnel in the dockyard. At a second trial a Spanish dockyard worker was sentenced to death for setting fire to a dockyard on June 30.

GILBERT AND ELLICE ISLANDS. A British colony in the southwestern Pacific, consisting of the Gilbert group of 16 atolls (Abaiang, Abemama, Aranuka, Arorae, Beru, Butaritari, Kuria, Maiana, Makin, Marakei, Nonouti, Nukunau, Onotoa, Tabiteuea, Tamana, Tarawa), the Ellice group of 9 atolls (Funafuti, Nanumaga, Nanumea, Niutao, Niulakita, Nui, Nukufetau, Nukulaelae, Vaitupu), the Phoenix group of 8 atolls (Birnie, Canton, Enderbury, Gardner, Hull, McKean, Phoenix, Sydney), and the distant Ocean, Fanning, Christmas, and Washington islands. All are of coral origin except Ocean Island. Total area, 216 square miles. Population, 1938 estimate, 35,000.

Production, etc. The principal crops are coconuts and pandanus fruit. Ocean Island has rich phosphate deposits (325,000 metric tons exported during 1939). In 1938-39 imports were valued at £178,767 and exports at £279,435. Finance (year ended June 30, 1940): revenue £67,846; expenditure £79,543. The colony is administered by a resident commissioner (with headquarters on Ocean Island), who is subordinate to the British High Commissioner for the Western Pacific (with headquarters in Fiji).

History. Japanese armed forces occupied some of the northernmost islands of the Gilbert group late in November, 1941, constructed an advance naval air-base on Makin, and fortified Tarawa. Late in November, 1943, armed forces of the United States recaptured the Japanese-held Gilbert Islands (Abemama, Makin, and Tarawa) after an engagement which lasted for 76 hours. See WORLD WAR.

GLASS. See BUILDING MATERIALS; also CHEMISTRY under *Glass*; MACHINE BUILDING; WAR PRODUCTION BOARD under *Conservation and Substitution*. **GLIDERS.** See AERONAUTICS under *Gliders*, and for *Glider Bomb*, under *Axis Types*.

GLYCERINE. See CHEMISTRY under *Explosives*.

GOA. See PORTUGAL under *Colonial Empire*.

GOLD. In forced eclipse because of the war, gold mine output during 1943 continued its sharp downward trend commenced in 1942. Most domestic gold production was a by-product of the mining of such essential metals as lead, zinc, and copper.

The full force of War Production Board order L-208, practically halting the operation of all mines whose principal product was gold, was felt in 1943. In actual administration, the stringent terms of the order were softened somewhat. Lode mines employing eight or less men, which could show that their employees were not needed elsewhere in war industry and that their critical material requirements were small, were given individual permits to operate on a limited scale. Mines whose ore contained appreciable quantities of essential minerals were allowed to recover the gold contained in the ore, upon special application. Several gold dredging companies were permitted to operate portions of their fleets in order to prevent undue economic hardship. The big, highly mechanized lode mines whose principal product was gold, were effectively closed, however, and their elimination caused the total 1943 mine production of gold to fall to slightly more than a third of 1942 output, or about a fourth of the 1941 total. Moreover, most of the large base metal mines in the far west were handicapped by labor shortage; thus, their gold production decreased along with their essential mineral output.

Canadian mines operated under labor and material restrictions so stringent that most of them were forced to close, or operate on a very limited scale. Central and South American dredges continued to operate, but their imports of material and equipment from the United States were limited by shipping space and export restrictions, as well as by lack of priorities.

United States mine production of 375,210 fine oz. during the first quarter of 1943 and 372,988 fine oz. during the second quarter, declined appreciably during the latter part of the year. The total annual production for 1943 amounted to about 1,364,000 fine oz., compared with 3,583,080 fine oz. in 1942. Utah was the leading producer. During the early part of the year, when Home-

stake Mining Co. was operating under an extension permit, South Dakota was in second place, but during the final half of the year Arizona, California, Colorado, and Nevada shared this honor.

CHARLES T. POST.

GOLD COAST. A British colony in West Africa, consisting of the Gold Coast colony (23,937 sq. mi.), Ashanti (24,379 sq. mi.), Northern Territories (30,486 sq. mi.), and Togoland (13,041 sq. mi.). Total area, 91,843 square miles; total population (1940 estimate), 3,962,520, including 3,182 non-Africans. Chief towns (1931 census figures): Accra, the capital (72,977), Kumasi (43,413), Sekondi (21,614), Cape Coast (19,412), Tamale (18,591), Koforidua (13,957). Education (1941-42): 467 government and assisted schools and 62,084 students; various schools supported by religious organizations; native administration schools had 818 students.

Production and Trade. The main products are cacao, kola nuts, palm kernels, copra, rubber, maize, yams, timber, gold, manganese, and diamonds. Gold production (1941): 886,000 troy oz. The sea fisheries employ 8,000 canoes and 50,000 men. Trade (1941): imports £8,600,000; exports £12,200,000. Chief imports: textiles, oils, machinery, tobacco, clothing, iron, and steel manufactures. Shipping (1941): 3,145,018 tons entered and cleared. Communications (1941): 490 miles of railways open for traffic, and 6,610 miles of roads suitable for motor traffic.

Government. Finance (year ended Mar. 31, 1942): revenue £5,541,514; expenditure £5,034,777; public debt £10,400,000. The appropriation for 1933-34 totaled £5,602,000. The Government of the Gold Coast colony is administered by a Governor, assisted by an executive council of official and unofficial members. There is a legislative council for the colony (exclusive of Ashanti and Northern Territories) of 30 members, including the Governor as president. The Governor has power to enact laws for Ashanti, Northern Territories, and Togoland, and their statistics of trade, etc., are included in the general total for the Gold Coast. Governor and Commander in Chief, Sir Alan Burns (appointed Oct. 1, 1941).

History. During the year a grant of £127,000 from the Colonial Development and Welfare funds was authorized for the establishment of a West African Institute of Arts, Industries, and Social Science at Achimota in the Gold Coast. The general aims of the Institute were investigation, teaching and development of local crafts and industries with reference to modern European experience; and investigation of local culture, social structure, and economic conditions, with special reference to problems arising from contact with European civilization.

GOLD HOLDINGS. See BANKS AND BANKING.

GOLF. The old game of golf, probably hit harder than any other sport by the rationing of gasoline and tires, and priorities on steel and reclaimed rubber, managed to stagger through a rather lackluster season in 1943. Were it not for a couple of national tournaments and a little sectional competition the divot-digging pastime would have passed right out of our sports picture. The U.S. Golf Association continued its policy of no tournaments and the Professional Golfers' Association, after struggling through a 1942 campaign, decided to abandon its championship.

The nearest approach to a national open was the

Tam O'Shanter staged by George S. May in Chicago. May, who came into national golf prominence the previous year with his first tournament at the Tam O'Shanter Club, enjoyed another marked success from the standpoint of entries and attendance with his All-America tourney last July. Honors in the \$10,000 open event were won by Harold (Jug) McSpaden of Philadelphia after a play-off with Orville (Buck) White of Greenwood, Miss. Tied with the Mississippi star at 282 after four rounds, McSpaden took top money when he holed a 20-foot putt on the last green to win the play-off by 71 to 72. The All-America promoted the sale of an estimated \$900,000 in war bonds and stamps.

Sam Byrd of Philadelphia, the former New York Yankee outfielder, who has come up fast as a golfer, captured the Victory open played at the Beverly C. C. in Chicago. Byrd scored a 277, five strokes fewer than Craig Wood, hold-over national open ruler, who was runner-up. Net proceeds of the Victory tournament were donated to the Wounded Soldiers' Fund. Later, Mr. May paired McSpaden and Byrd in a 36-hole challenge match at the Tam O'Shanter Club and McSpaden triumphed by eight shots, 141 to 149.

The United States Seniors' Association championship was won by Ellis Knowles, intercollegiate titleholder 'way back in 1907, who set a new record for the 39-year-old competition when he carded a first-round 67, five under par for the famous Apawamis Club course. All entry money in this tournament was given to the Red Cross.

New York State held three of its title tournaments simultaneously at Lake Placid, with Ray Billows of Poughkeepsie beating Joe Ruszas of Albany to carry off the amateur laurels for the fifth time. Miss Kay Byrne of Rye defeated Miss Margaret Nichols of Yonkers for the women's crown and F. R. Ryan of Roslyn, L. I., annexed the State seniors' title. The New York State junior championship, played at Syracuse, resulted in victory for George Stuhr, Garden City, L. I., high school star.

Amateur honors in New Jersey went to Frank Bedford when he defeated the popular Mike Cestone in an extra-hole match.

Miss Patty Berg, who suffered a severe injury in an automobile accident last winter, returned to golf in the summer of 1943 and made a great comeback by winning the women's Western open for the second time in three years. The Minneapolis redhead, now a Second Lieutenant in the Marines, defeated Miss Dorothy Kirby of Atlanta, 1 up, to succeed Miss Betty Jameson as champion. Miss Jameson, now a resident of Mexico City, did not defend the title. The women's Western amateur tournament was won by Miss Dorothy Germaine, 18-year-old Philadelphia playground supervisor, who became the first Easterner to capture the 43-year-old event when she defeated Miss Agnes Wall of Menominee, Mich., by the surprising score of 5 and 4.

College golfers enjoyed a comparatively good year. Yale won the national championship by a margin of four shots over Michigan, while Walter Ulrich, Carleton College sophomore, annexed the individual title. Michigan carried off the Big Ten team crown and Navy proved best in Eastern intercollegiate play.

THOMAS V. HANEY.

GOOD NEIGHBOR POLICY. See COORDINATOR OF INTER-AMERICAN AFFAIRS; PAN AMERICANISM; the Latin American countries, under *History*.
GOUGH ISLAND. See ST. HELENA.

GOVERNMENTAL CONTROLS. See BUSINESS REVIEW under *War Controls*; ELECTRIC LIGHT AND POWER under *Government*; FINANCIAL REVIEW under *Financial Regulation*; LABOR CONDITIONS under *Government Control*; LAW under *Decisions Concerning the Federal System and Supervision of Federal Agencies*; UNITED STATES and articles on regulatory government agencies; and various foreign countries under *History*.

GOVERNMENT OF OCCUPIED TERRITORIES. See UNITED NATIONS; German-Occupied Countries under *Government*.

GRADE LABELING. See FOOD INDUSTRY; PRICE ADMINISTRATION, OFFICE OF.

GRAHAM LAND. See FALKLAND ISLANDS.

GRAPHIC ARTS. See ART under *Prints*.

GRASSHOPPER. See INSECT PESTS.

GRAZING SERVICE. A branch of the U.S. Department of the Interior, which administers grazing on 142,000,000 acres of Federal Range. Director in 1943: Richard H. Rutledge.

GREAT BRITAIN. Official designation for the political union embracing England, Scotland, and Wales. Capital, London. Sovereign, George VI, who succeeded to the throne upon the abdication of Edward VIII on Dec. 10, 1936, and was proclaimed King on Dec. 12, 1936. Great Britain, together with Northern Ireland, the Isle of Man, and the Channel Islands, forms the United Kingdom of Great Britain and Northern Ireland. For statistical purposes, the Isle of Man, the Channel Islands, and in some cases Northern Ireland, are included under Great Britain. See BRITISH EMPIRE; IRELAND, NORTHERN.

Area and Population. The area of Great Britain, the census population of Apr. 27, 1931, and the estimated population in 1941, are shown by political divisions in the accompanying table.

GREAT BRITAIN: AREA AND POPULATION

Divisions	Area in sq. miles	Population ^a	
		1931	1941
England ^b	50,874	37,794,003	41,460,000
Wales.....	7,466	2,158,374	
Scotland.....	30,405	4,842,980	5,007,000
Isle of Man.....	221	49,308	140,000
Channel Islands...	75	93,205	
Total.....	89,041	44,937,444	46,607,000

^a Exclusive of army, navy, and merchant seamen abroad.

^b Including Monmouthshire.

Live births in England and Wales in 1942 numbered 653,075 (15.8 per 1,000), which was nearly 68,000 more than in 1941 and the highest yearly total registered since 1928. Deaths in the same area, including war deaths, numbered 479,907 (11.6 per 1,000), which was 55,000 less than in 1941 and the lowest of the four war years. The infant mortality rate fell to 49 per 1,000 live births from 59 per 1,000 in 1941. Marriages declined to 368,252 in 1942 but the marriage rate was higher than any recorded for the preceding 89 years except for the war years 1919, 1920, and 1939 to 1941 inclusive. The live birth rate for Scotland in 1942 was 18 per 1,000 (17.9 in 1941); death rate, 12.9 (14.5 in 1941).

Estimated populations of the chief cities in 1939, except as stated, were: Greater London, 8,700,000 (1938); County of London, 4,062,800 (1938); Glasgow, Scotland, 1,131,800 (1940); Birmingham, 1,052,900; Liverpool, 822,400; Manchester, 727,600; Sheffield, 522,000; Leeds, 497,000; Edinburgh, Scotland, 475,500 (1940); Belfast, North-

ern Ireland, 438,112 (1938); Bristol, 419,200; Hull, 317,800; Bradford, 287,500; Newcastle, 293,400; Stoke-on-Trent, 265,800; Nottingham, 278,800; Portsmouth, 260,300; Leicester, 262,900; Croydon, 243,900; Cardiff, Wales, 224,850 (1938); Coventry, 220,000; Plymouth, 215,500.

Education. Enrollment in the 21,678 elementary schools in England and Wales numbered 4,971,357 in 1939, and the total net expenditure of local authorities for elementary education was £74,970,611 for 1939-40. In Scotland there were 2,899 primary schools with 604,977 enrolled pupils, and the total ordinary expenditure of educational authorities for 1941-42 was about £14,817,569. England and Wales had 2,156 secondary schools recognized by the Board of Education as efficient, with 569,089 pupils in 1937-38. Of these schools, 1,398 received grants-in-aid. Total net cost of secondary education in 1939-40 was £23,724,843. In Scotland there were 1,343 schools with secondary divisions, with an average enrollment of 380,970, in 1941. There are 11 universities in England, 4 in Scotland, and 1 in Wales. The combined student enrollment in 1942-43 was 38,806.

In 1939, 94 per cent of all British children were educated in schools wholly or partly maintained by public authorities, and about 42 per cent of all university students were assisted by the state. Needy students in secondary schools also received limited public assistance. The provision of meals and milk to school children was greatly expanded during the war (3,250,000 pupils were receiving milk and about 1,000,000 a meal daily at school in 1942). As a result, a definite improvement in the health of school children was reported by the President of the Board of Education.

Religion. The Church of England (q.v.), with an Episcopal form of government, and the Church of Scotland (Presbyterian) are the "established religions" in England and Scotland, respectively. Recent statistics of "full members" of leading denominations in England and Wales were: Anglican, 2,294,000; Methodist, 1,262,596; Congregational, 494,199; Baptist, 383,373; Calvinistic Methodist, 261,287. The number of Roman Catholics was estimated at 2,361,504 in 1937. The Church of Scotland had 2,522 congregations with 1,278,297 members on Jan. 1, 1941. There were 404 Scottish Episcopal churches and missions with 61,547 communicants in 1939, and 450 Roman Catholic churches, chapels, and stations, with 614,021 adherents in 1937.

Production. Detailed statistics of agricultural, mineral, industrial and other production have been withheld since the outbreak of World War II. For the latest available figures, see 1942 YEAR BOOK, p. 244-245. The net national income at factory costs was estimated at £4,490,000,000 for 1938, £5,726,000,000 for 1940, £6,619,000,000 for 1941, and £7,384,000,000 for 1942. War expenditures rose from 15 per cent of the national income in 1938 to about 71 per cent in 1942. This transition was accompanied by the far-reaching reorganization of the national economy on a war basis. (see preceding YEAR BOOKS and *History* below).

In 1938 the United Kingdom, with 12,957,000 acres under cultivation, produced some 40 per cent of its own food requirements. By 1943 the area available for cultivation decreased 2 per cent as a result of expanded industrial and military establishments, but the area under actual cultivation increased 53 per cent to over 18,000,000 acres, which supplied about 70 per cent of the food required. As compared with 1938 yields, the 1943 crops of wheat, barley, oats, rye, and mixed grains

increased by 65 per cent, potatoes more than 80 per cent, vegetables 55 per cent. While the cattle population increased, the number of pigs declined 51 per cent, sheep 18 per cent, and poultry 20 per cent.

The diversion of industry from peacetime to war production was virtually completed during 1943. The Minister of Supply reported that output of munitions and war supplies in the first quarter of 1943 was 40 per cent greater than for the first quarter of 1942. The concentration of consumer-goods industries, begun in March, 1941, to release labor and factory space for war purposes, permitted a reallocation of about 250,000 workers and 137 million square feet of factory and storage space, up to Feb. 16, 1943. The estimated output of coal in 1941 was 208,800,000 metric tons (230,658,000 in 1938). See *History*.

Foreign Trade. Imports in 1940 were valued at £1,099,869,000 (£885,513,000 in 1939); exports of British products, £413,084,000 (£439,536,000 in 1939). Of the 1940 imports, food, drink, and tobacco accounted for £421,004,000; raw and semi-manufactured materials, £336,495,000; manufactured articles, £336,209,000. Of the exports of British produce, £33,352,000 represented food, drink, and tobacco, £36,292,000 raw and semi-manufactured materials, and £335,960,000 manufactured articles. For the latest available data on the distribution of British trade, see YEAR BOOK for 1938, p. 328. For trade with U.S. in 1941 and 1942, see TRADE, FOREIGN.

Finance. Closed financial accounts for the fiscal years ending March 31 are shown in the accompanying table.

UNITED KINGDOM: BUDGET OPERATIONS*
(In millions of pounds)

Year	Receipts	Total Expenditures	War Expenditures	Deficit
1938-39.....	1,006.2	1,018.9	695.7	12.7
1939-40.....	1,132.2	1,408.2	1,078.3	276.0
1940-41.....	1,495.3	3,970.7	3,637.1	2,511.4
1941-42.....	2,174.6	4,876.3	4,501.6	2,701.7
1942-43.....	2,922.4	5,740.3	5,295.8	2,817.9
1943-44 ^b	3,018.1	5,866.7	5,346.1	2,848.6

* Excluding lend-lease and in 1943-44 Canadian-British mutual aid, but including in 1942-43 a Canadian financial contribution to the British Treasury of £224,700,000. ^b Estimates.

The public debt rose from £8,163,000,000 at the outbreak of the war to £17,732,000,000 on June 30, 1943. On the latter date the internal debt was £16,440,000,000 (consolidated, £12,187,000,000; floating, £4,253,000,000) and the external debt £1,292,000,000 (at par). The British Exchequer's wartime advances to allied governments up to June 30, 1943, totaled £195,000,000, exclusive of British lend-lease aid to those governments. The average free exchange rate of the pound sterling was \$4.8894 in 1938, \$4.4354 in 1939, \$3.83 in 1940, \$4.032 in 1941, \$4.035 in 1942.

Shipping. On June 30, 1939, the British merchant fleet aggregated 21,001,925 gross tons. New construction and acquisition of fleets from countries overrun by Germany offset war losses up to Nov. 1, 1940, when the total shipping available to the British was placed at 21,000,000 tons. Between June, 1941, and September, 1943, a total of 238 German, Italian, and Finnish ships aggregating 1,279,400 tons were seized and added to the British merchant navy. In addition 203 Danish ships were requisitioned. For British shipping losses, see SHIPPING.

Railways, etc. There were 20,162 miles of railway

line open in Great Britain on Jan. 1, 1939 (51,000 miles of track). After the war began, management of all lines was pooled under a committee of railway executives responsible to the Ministry of War Transport. In 1942 it was estimated that the transport of troops, coal, and war materials accounted for 60 per cent of all railway traffic. Roads and highways in the United Kingdom totaled 180,527 miles in 1940. The total length of British home and overseas civil air routes was 30,624 miles in August, 1939. Twice-a-week service between London and Lisbon, Portugal, was started on June 4, 1940. A North Atlantic air ferry and supply route was inaugurated via Botwood, Newfoundland, in 1941. British Overseas Airways flying boats and landplanes flew about 10,000,000 miles in 1942, carrying approximately 43,000 passengers, 850 tons of mail, and 2,250 tons of freight. The capacity ton-miles provided increased from 8,674,972 in 1940 to about 21,600,000 in 1942.

Government. The United Kingdom of Great Britain and Northern Ireland is a limited monarchy with an unwritten constitution, under which final legislative, judicial, and administrative authority is vested in a Parliament of two houses, acting through a cabinet drawn from its members. The House of Commons consists of 615 members, elected by universal male and female suffrage on the basis of one member for every 70,000 of population. The House of Lords in 1943 had 795 members, including 32 minors not seated, who are variously selected—by heredity, appointment, by virtue of office, and by election.

The standing of the Government parties in the House of Commons in 1943 was as follows (names of leaders in parentheses): Conservatives (Winston Churchill), 366; Labor (Clement R. Attlee), 168; Liberal National party (Viscount Simon), 27; Liberals (Sir Archibald Sinclair), 18; National Labor party (Malcolm MacDonald), 6; Nationals, 4; total 589. The Opposition consisted of 22 Independents, 3 Independent Laborites (leader, James Maxton), and 1 Communist.

The last general election was held in November, 1935. The election due in 1940 was postponed for one year through an agreement reached by the principal political parties on Sept. 22, 1939, which was prolonged each succeeding year of the war. On May 12, 1940, Winston Churchill replaced Neville Chamberlain as Prime Minister and a National Government was formed, including the Labor and Liberal opposition. There were successive reorganizations of the Churchill Government. On Sept. 3, 1939, Prime Minister Chamberlain replaced the Cabinet of 22 members with a War Cabinet of 9 members (later 8), who assumed responsibility for coordinating the nation's war effort. The other Ministers (heads of Government departments) no longer retained Cabinet rank. The War Cabinet was assisted by committees of Ministers, usually acting under the direction of a Cabinet member.

Members of the War Cabinet at the beginning of 1943 were: Prime Minister, First Lord of the Treasury, Minister of Defense, Winston Churchill; Dominions and Deputy Prime Minister, Clement R. Attlee; Foreign Affairs and Leader of the House of Commons, Anthony Eden; Home Secretary and Minister of Home Security, Herbert Morrison; Lord President of the Council, Sir John Anderson; Production, Oliver Lyttelton; Labor and National Service, Ernest Bevin; Minister of State (charged with coordination of the Empire's war effort in the Middle East), Richard G. Casey of Australia, with headquarters in Cairo. For changes during 1943, see *History* under CABINET CHANGES.

HISTORY

Road to Victory. The Battle of El Alamein and the Anglo-American landings in French North Africa in the late autumn of 1942 started Britain on the road to victory after more than three years of failure, defeat, and dire peril. During 1943 the road broadened and the pace quickened. Defeat of the German military colossus was brought within measurable distance by a series of Allied hammer blows. To these the British people, under their superb war leader, Prime Minister Winston Churchill, contributed their full share.

British forces bore the major burden of the fighting in Tunisia, Sicily, and the Italian mainland that toppled Mussolini's Fascist regime, knocked Italy out of the Axis war coalition, and opened the Mediterranean to Allied shipping. Anglo-American naval-air forces, with Canadian help, decisively crushed the German submarine menace, which Churchill in 1942 had declared the major obstacle to victory.

Meanwhile the R.A.F.'s powerful bombing fleets spread devastation far and wide among German cities and industrial centers, causing a marked slump in Germany's home-front morale. While serving as an unsinkable aircraft carrier anchored off the coast of Axis Europe, the island of Britain was steadily developed into a powerful and well-equipped base for the impending land invasion of Hitler's "European fortress." Successive great convoys landed contingent after contingent of American and Canadian troops and huge quantities of supplies to strengthen the Allied invasion army previously built up in the British Isles.

These grand preparations were facilitated by the steadily declining force and frequency of German air raids. With the danger of attack and invasion waning, it was announced on June 30 that Britain's civil-defense forces had been reduced by one-third during the preceding year and that another cut of one-sixth was planned. Yet sporadic attacks by fast German fighter-bombers on English cities and towns occasionally caused serious damage and casualties. An air raid alarm on the night of March 3 produced tragedy in one London shelter. As a crowd poured down the steep and dimly-lighted steps, a woman slipped and fell, causing a jam in which 178 persons were killed and 60 injured.

Even more important than the sensational change in Britain's military position were the great gains registered by Prime Minister Churchill and Foreign Minister Eden in the diplomatic field. The close Anglo-American collaboration established in previous years was extended by a series of military-political conferences and discussions—at Casablanca, Washington, and Quebec. Then the Soviet Union and China were for the first time brought into intimate cooperation with the Anglo-American powers by the four-power conferences at Moscow, Cairo, and Tehran (see UNITED NATIONS). In the words of President Roosevelt, the latter conferences forged the United Nations into "a single sword . . . wielded as if by a single brain and a single hand." Temporarily, at least, they had banished danger of a breach between the Soviet Union and the Anglo-American powers, which remained the greatest single threat to a complete United Nations victory.

War Problems and Negotiations. This significant progress was achieved in the face of formidable obstacles. Divergent national interests and deep-rooted suspicions tended to divide the four chief military powers of the United Nations' coalition. As the Axis menace waned and the collapse of Nazi

Germany loomed nearer on the European horizon, the divisive tendencies within the United Nations gained headway.

Friction in North Africa. The first such clash arose late in 1942 over the policy of collaboration with the Giraud administration in French North Africa, adopted by General Eisenhower as commander-in-chief of the Anglo-American forces in that area. This policy, while inspired by military considerations, was much more in line with the State Department's French policy than with the pro-de Gaullist course followed by the British Government since June, 1940. It aroused deep misgivings and bitter criticism in Britain. The delays and early setbacks in the Tunisian campaign added to British disquiet and gave rise to reports of a serious quarrel between Washington and London over Allied policy in North Africa.

British officials took prompt steps to end the rising tension. On January 14 Minister of Information Brendan Bracken declared that "the British Government has given General Eisenhower the power of attorney and will support him unquestioningly, whatever he does." When the House of Commons reconvened January 19 after a long recess, Deputy Prime Minister Clement Attlee affirmed the Government's faith in Eisenhower's military leadership. Politically, he declared, Britain and the United States had "a single objective, which is to promote the union of all Frenchmen in the war against the Axis for the liberation of France."

Casablanca Conference. One of the four major aims of the 10-day conference held by Churchill, Roosevelt, and their combined staffs at Casablanca late in January was to unite de Gaulle, Giraud, and their supporters in a single French liberation movement. For reasons explained elsewhere (see *FRANCE under History*), this initiative failed at the outset. But under constant Anglo-American prodding, the French factions were finally united in the French Committee for National Liberation on June 3. The formation of this committee visibly strengthened the anti-Axis coalition. However the emergence of de Gaulle as the dominant figure in French affairs and his outspoken opposition to Anglo-American policies created new difficulties, which had not been overcome at the year's end. In dealing with de Gaulle and other French affairs, the British and American Governments after Casablanca displayed close accord.

Before returning to London from Casablanca, Prime Minister Churchill made a flying visit to Tripoli, Libya, to review the victorious Eighth Army and to Turkey (q.v.) for conferences with President Inonu. On February 12 he made one of his memorable speeches before the House of Commons, summarizing the results of the Casablanca conference. Britain and America, he said, "have now a complete plan of action which comprises apportionment of forces as well as their direction, and this plan we are going to carry out . . . during the next nine months, before the end of which we (Churchill and Roosevelt) will make efforts to meet again." He revealed that, while he spoke, Lieut. Gen. Henry Arnold, head of the U.S. Army Air Forces, and Field Marshal Sir John Dill, head of the British Joint Staff Mission in Washington, were "in Chungking concerting what we have in mind with the Chinese Generalissimo."

Discussions in Washington. One month later (March 12) Foreign Secretary Eden arrived in Washington for "a general exchange of views with the United States Government on all aspects of the war situation, and to discuss the most effective

method of preparing for meetings between the governments of all United Nations to consider questions arising out of the war." The outcome of discussions was not revealed, but it was indicated that before returning to London on April 4 Eden did much to reconcile American and Soviet viewpoints on war and postwar issues.

While Eden was in America, Churchill in a broadcast on foreign and domestic policy on March 21 stressed the necessity of including Russia in the creation of a postwar world order. Mutual concessions, he said, were necessary to reach agreements among the great powers and no one nation could expect to achieve the full satisfaction of its individual wishes. His failure to list China among the great powers was remedied by Eden in a subsequent address before the Maryland General Assembly.

The approaching conclusion of the Tunisian campaign sent the Prime Minister to Washington early in May with a large staff of military and naval experts to map out the next moves to achieve the goal of "unconditional surrender" by the Axis powers announced at Casablanca. Churchill arrived in Washington for his fifth war conference with Roosevelt on May 11 and did not return to London until June 5. On May 19, in his second address before a joint session of the U.S. Congress, he presented a masterly survey of the progress achieved since his first wartime visit to Washington in December, 1941.

The main points of this speech were: (1) a pledge that Britain would wage war to the end against Japan "side by side with you in accordance with the best strategic employment of our forces," (2) his statement that the "experiment" of trying to bring about the collapse of Germany and Italy by the use of airpower by itself was "well worth trying, so long as other measures are not excluded," (3) an expression of hope that he and Roosevelt would soon "achieve what we have so long sought—namely, a meeting with Marshal Stalin and if possible with Generalissimo Chiang Kai-shek," and (4) his declaration that "we must do everything that is sensible and practicable to take more of the weight off Russia in 1943."

On his way home from Washington, the Prime Minister detoured by way of North Africa to convey to Allied commanders there the decisions taken at Washington. He was accompanied by Gen. George C. Marshall, Chief of Staff of the U.S. Army. Rendering account of his Washington trip to the House of Commons on June 8, he declared that "amphibious operations of a peculiar complexity and hazard on a large scale are approaching." While the Allied armies in North Africa rested and prepared for the invasion of Sicily, King George visited the British forces in North Africa and Malta during the latter half of June.

Mediterranean Problems. The successful invasion of Sicily in July precipitated the downfall of Mussolini on July 25 and the capitulation of the Badoglio Government to the Allies early in September. Then came the attack upon the Italian mainland, the alignment of the Badoglio Government with the United Nations against Germany, the French reoccupation of Corsica, and the beginning of Allied air attacks from Italy upon German bases in the Balkan peninsula.

These developments raised urgent new problems for the Churchill Government both at home and abroad. There was strong criticism in the British Parliament and press of the arrangements made with Badoglio. De Gaulle protested the exclusion of the French Committee of National Lib-

eration from the peace negotiations with Italy. Moscow, by a series of diplomatic moves at variance with Anglo-American policies, indicated dissatisfaction with the attention given Russian interests in the Balkans and the Mediterranean area. Moscow also applied increased pressure for the opening of another front in Western Europe. The British, who had long supported the Greek and Yugoslav Governments-in-Exile, were confronted with the necessity for immediate clarification of policy with respect to the Balkan states.

Foreign Secretary Eden replied to attacks upon the Government's Italian policy in the House of Commons August 3. The whole purpose of the Government, he said, was to obtain Italy's unconditional surrender "so that we can turn the war even more vigorously to Germany." He declared the Allies would be "only too ready" to adopt a "reasonable attitude" toward Italy if they got what they wanted for prosecuting the war against the Reich. The subsequent agreements concluded with Badoglio and the role of the Allied Military Government (see ITALY under *History*) aroused further criticism in Britain. Government spokesmen gave assurances that the Allies had given no secret commitments to Badoglio and King Emmanuel, that conclusion of the armistice with them did not imply recognition, and that the decision as to the future government of Italy would be left to the Italian people.

Quebec Conference. The impending elimination of Italy from the war and the progress of the Russian summer offensive sent Churchill overseas again in August for further discussions and conferences at Hyde Park, Quebec, and Washington (see UNITED NATIONS under *The Quebec Conference*). Lord Louis Mountbatten was appointed head of a new Southeast Asia Command (see WORLD WAR, map) to direct the intensified warfare against Japan made possible in that area by the opening of the Mediterranean to Allied shipping and the release of strong units of the British fleet that had been on guard against the Italian navy. Agreement was reached on limited recognition of the French Committee of National Liberation (see FRANCE under *History*).

Immediately after conferring with Churchill and Roosevelt at Quebec, Foreign Secretary Eden returned to London for a series of discussions with the Soviet and American ambassadors that paved the way for the conference of the "big three" Foreign Ministers in Moscow and for the Cairo and Tehran conferences. Meanwhile Churchill in a radio broadcast from Quebec on August 31 publicly invited the Soviet Government to join in these "necessary and urgent" conferences. He said Britain and the United States would be "very glad to associate Russian representatives with us in the political decisions which arise out of the victories the Anglo-American forces have gained in the Mediterranean."

The necessity for continued Anglo-American cooperation as the basis of any larger system of world security was the burden of an address delivered by Prime Minister Churchill at Harvard University on September 6. "If we are together nothing is impossible," he said. "If we are divided all will fail." His insistence that the "immensely powerful" Anglo-American machinery of collaboration must be kept "working and in running order" after the war was endorsed by high Washington officials the following day.

After further conferences in Washington, Churchill returned to London on September 19. On the 21st he gave the Commons a lengthy review of

recent war developments, which largely dissipated a rising tide of criticism of Allied military and political strategy in Italy. He declared that Italy's African empire was "irretrievably lost," that the Allies had definitely gained the upper hand over Germany at sea and in the air, and that "the bloodiest portion of this war for Britain and the United States lies ahead of us."

Cooperation with Russia. In line with the decisions taken at Quebec, Russia was consulted by the British and American authorities entrusted with peace negotiations with Italy, and a Soviet plenipotentiary was invited to participate in the signing of the armistice convention. Moscow, however, empowered General Eisenhower to sign in its behalf. Russia was also invited to become a member of the Mediterranean Commission, which the Quebec conferees agreed to create for the solution of political problems in that area. A great increase in war and food shipments to Russia from Britain, the United States, and Canada was provided for in a new lend-lease agreement signed by the four powers in London October 18. (In addition to arms and munitions, the British Government sent £70,000,000 worth of supplies to Russia between June, 1941, and December, 1943.)

These preliminary moves paved the way for the important decisions of the Moscow Conference (see UNITED NATIONS). As Foreign Secretary Eden stated on November 11 following his return from Moscow, these agreements placed the responsibility for winning the war and ensuring "lasting peace" directly upon Britain, Russia, and the United States. The military and political decisions for carrying this program into effect were taken at the Tehran Conference, after China had been brought into the circle of the great Allied powers by the decisions taken in Cairo. Reporting to the House of Commons on these conferences on December 14-15, Eden declared that "the military plans which we laid down at Tehran call for all our Allied resources in every respect." He said the timing of the Allied invasion of Western Europe and other military operations had been agreed on and "in due course the decisions . . . will be unrolled on the field of battle." He gave assurances that no secret agreements had been made at Tehran and that none would be made as long as he was Foreign Minister. The appointment of General Eisenhower to direct the Anglo-American invasion of Axis Europe from the British Isles followed on December 24.

Meanwhile the Advisory Council for Italy authorized at Moscow was established, comprising American, British, Russian, and French representatives and with Greek and Yugoslav representation promised. The European Advisory Commission decided upon at Moscow was set up in London December 15. Composed of the U.S. and Soviet Ambassadors and Sir William Strang of Britain, it was empowered to "recommend" joint policies on common European political problems. Many such problems remained to be solved, particularly the question of boundaries in Eastern and Central Europe and the conditions under which Allied military commanders would turn over the political administration of occupied territories to national authorities.

Other Foreign Relations. At the conclusion of the Tehran Conference, Churchill and President Roosevelt returned to Cairo for further important conferences with the President of Turkey, with leaders of the Greek and Yugoslav Governments-in-Exile, and with various other officials concerned with other Middle Eastern problems. Turkey was

brought into still closer collaboration with the United Nations. New efforts were made to heal the breach in Yugoslavia between the pro-Communist Partisans and the forces of Gen. Draja Mikhailovitch, and to end the somewhat similar civil strife in Greece. Anglo-American material support had been given increasingly to the Yugoslav Partisans after the Allied landings in Italy. Explaining British policy in the Balkans before the House of Commons in mid-December, Foreign Secretary Eden said it was guided by three principles: (1) extension of all practical aid to those elements actively fighting the common enemy, (2) use of Allied authority to assure Greece, Yugoslavia, and other enemy-occupied countries of freedom to choose their own governments after liberation, and (3) the closest possible concert with Britain's allies.

The British, with American support, also pressed the French Committee of National Liberation to fulfill the pledge of independence given to Syria and Lebanon in 1941. An Anglo-American policy was reported to have been adopted, though not announced up to the year's end, on the thorny question of Arab-Jewish claims in Palestine. Another acute problem, that of Anglo-Soviet relations in and with Iran, had been temporarily disposed of by a special declaration of the Tehran Conference.

Anglo-American policy toward France, Italy, and Yugoslavia and the subsequent Anglo-American-Soviet agreements aroused apprehension among the governments-in-exile of the smaller European powers under German occupation. They opposed plans for establishing the Allied Military Government in newly liberated territories pending determination of the popular will. Some feared that their national interests and freedom of action would be sacrificed or restricted in behalf of Anglo-Soviet collaboration. At the same time the internal and external quarrels of the governments-in-exile greatly obstructed British diplomacy in its effort to promote permanent unity and solidarity among the United Nations.

The Foreign Office strove incessantly to mend the dangerous rift between the Soviet and Polish Governments that took place in April, but without success up to the end of 1943. Largely because of this delicate problem, Britain delayed as long as possible the conclusion of the Soviet-Czechoslovak mutual assistance pact which was signed in December. Foreign Secretary Eden met with the Foreign Ministers of the exiled governments on September 1 to inform them of the discussions and decisions taken at Quebec. On the eve of his departure for the Moscow Conference, he called together the Foreign Ministers of Norway, Czechoslovakia, the Netherlands, Poland, and Belgium to assure them that the great powers would seek a general European settlement on the basis of "joint responsibility" instead of attempting to divide Europe into "spheres of influence."

Despite growing pressure from some of the exiled governments and from a section of unofficial opinion in the United States, the British Government in May and again in November rejected proposals for relaxing the blockade of Europe to permit the sending of foodstuffs to the German-occupied countries. An exception, however, was made in the case of Greece. "We know by experience that the Germans would not hesitate to create more starvation and shortages if such a program were followed now," a spokesman for the Ministry of Economic Warfare explained on November 10.

The steady improvement of British and Allied

military fortunes was reflected in the action of Portugal, announced October 12, in authorizing the British Government to use naval and air base facilities in the Azores for anti-submarine patrols. It was further indicated by the less conciliatory attitude displayed in London toward the Franco Government in Spain. See each of the countries mentioned above under *History*.

Empire Affairs. As the war drew toward its close, the problem of adjustment to new world conditions produced active ferment in the British Empire. On November 25 Prime Minister Jan C. Smuts of the Union of South Africa proposed that Britain should remedy her unequal partnership with Russia and the United States by establishing close ties with the democracies of Western Europe. In a widely discussed speech delivered at Adelaide August 14, Prime Minister Curtin of Australia proposed that the foreign and defense policies of the empire should be withdrawn from the separate Commonwealth governments and parliaments and concentrated in a single imperial executive agency. Australian leaders also proposed a permanent consultative council of the United Nations chiefly interested in the Pacific to prevent a repetition of Japanese or other aggression. In the Canadian House of Commons on July 9 spokesmen of the Progressive Conservative party and Cooperative Commonwealth Federation recommended Canada's entry into the Pan American Union.

There was a growing agitation for the amalgamation of Southern Rhodesia and other British territories in South Africa with the Union of South Africa. South-West Africa was also reported to be seeking to throw off the League of Nations mandate in favor of incorporation in the Union of South Africa. Prime Minister Smuts of the Union of South Africa proposed that the future development of British colonies be entrusted to regional Commonwealth councils representative of Britain and the Dominions with interests in the area. British and Commonwealth political and economic relations with the United States, Russia, and the projected postwar world order were also under active discussion in Britain and each of the Dominions. Prime Minister Churchill told the House of Commons September 22 that he had been trying for two years to arrange a meeting of all the Prime Ministers of the Empire to discuss these and related issues. He expressed hope that such a meeting would take place early in 1944.

The future of Newfoundland, British postwar relations with Belgium and the other small democracies of western Europe, British policy toward India, and colonial reform were other urgent problems awaiting solutions. The deadlock between the British Government and the All-India National Congress persisted throughout 1943. But the appointment of Field Marshal Viscount Wavell as Viceroy on June 18 and of Richard Gardiner Casey as Governor of Bengal on December 24 aroused some hope of clarification of Anglo-Indian relations. Meanwhile there was strong criticism in Britain of the Government's failure to grapple more effectively with famine conditions in India.

Colonial Reform. Concrete steps were taken during the year to speed up the advance toward self-government within the empire on the part of the British crown colonies and other colonial dependencies. Col. Oliver Stanley, the Colonial Secretary, said on March 5 that "the administration of the British colonies must continue to be the sole responsibility of Great Britain" but that this did not exclude the possibility of "close international cooperation" in promoting colonial development. On

March 17 Prime Minister Churchill declared in the House of Commons that Colonel Stanley spoke for the Government in rejecting unofficial American suggestions for international administration of British colonies. "The policy of the Government," said Churchill, "is to play for the fullest possible political, economic, and social development of the colonies within the British Empire, and in close cooperation with neighboring and friendly nations."

Elaborating on the Government's colonial reform program before the House of Commons July 13, Colonel Stanley announced that Britain favored the establishment of regional colonial commissions to facilitate the cooperative solution of problems common to distinctive colonial areas. He said Britain would welcome the collaboration of other states with colonial possessions in the same regions and with other powers having a "major strategic or economic interest" there.

Meanwhile the Colonial Ministry took a series of steps calculated to strengthen the political, economic, and social foundations for colonial self-government. A more liberal constitution was offered to Jamaica, and further constitutional reform was promised Ceylon, Malta, and Cyprus after the war. The appointment in December of Prof. Noel Hall, well-known economist, as development adviser for the West African colonies was one of several important measures initiated in 1943 for the long-range economic development of the colonies. For a more detailed account, see Ronald Stuart Kain, "Britain's New Colonial Policy," *Yale Review*, March, 1943.

Internal Politics. Despite fairly widespread dissatisfaction with the Churchill Government's slow pace in preparing for postwar reconstruction, the electoral truce adopted by the major parties in May, 1940, was extended for another year on October 26 when Parliament voted itself another year of life. The Prime Minister defended the electoral truce on April 15 as essential to national unity in prosecuting the war. His view was endorsed by the Labor party's convention in London in mid-June, 2,243,000 to 374,000, and by the Liberal party's convention in mid-July. As a result of this agreement among the three chief parties of the national coalition, the House of Commons entered upon its ninth year of life, the longest period served by any Parliament since 1679.

Cabinet Changes. Prime Minister Churchill reshuffled his Cabinet several times during the year without upsetting materially the party balance or unity of the Government. On February 8 Herbert Morrison, Home Secretary and Minister of Home Security, was named to the additional post of Minister of Town and Country Planning. Following the death of Sir Kingsley Wood, the Chancellor of the Exchequer, Churchill on September 24 transferred Sir John Anderson to the vacant Treasury post; named Maj. Clement R. Attlee, Labor party leader and Deputy Prime Minister, to succeed Sir John as Lord President of the Council while retaining his other posts; appointed Viscount Cranborne, former Lord Privy Seal, as Secretary of State for Dominion Affairs; brought Lord Beaverbrook back into the Cabinet as Lord Privy Seal; and created the new post of Minister of State in the Foreign Office for Richard K. Law, son of former Prime Minister Andrew Bonar Law. As Lord Privy Seal, Lord Beaverbrook assumed charge of postwar civil aviation problems for the Government. Major Attlee took over the chairmanship of the important Cabinet Home Affairs Committee, and Sir John Anderson was delegated to work with financial and economic experts on postwar problems.

Beveridge Plan Debate. The major criticism directed at the Churchill Government on internal issues arose from its refusal to place Sir William Beveridge's social security plan in effect immediately (see 1943 YEAR BOOK, p. 560, for the Beveridge plan). The Prime Minister had the backing of the Labor members of his Cabinet in insisting that the scheme required the prior organization of economic life to provide the wealth needed to meet the projected social insurance claims. Dissatisfaction with this attitude was so widespread that it threatened the continuance of the political truce. The Prime Minister moved to head off this agitation in a radio address of March 21 in which he proposed a broad and liberal four-year program of postwar social and economic reconstruction.

This shrewd move enabled the Prime Minister to postpone action on the social security problem until late in the year. When the tide of criticism began to rise again, he announced a further reshuffling of the Cabinet on November 11, in which Lord Woolton, the popular Minister of Food, was named to the newly created post of Minister of Reconstruction, with a place in the War Cabinet. Col. J. J. Llewellyn, Minister Resident for Supply in Washington, replaced Lord Woolton as Food Minister. At the same time H. U. Willink, another Conservative back-bencher, became Minister of Health in place of Ernest Brown, who was shifted to the Chancellorship of the Duchy of Lancaster. Ben Smith, a Laborite, succeeded to Colonel Llewellyn's former Washington post. Alfred Duff Cooper, retiring Chancellor of the Duchy of Lancaster, was later named Minister to the French Committee for National Liberation. One further change in the War Cabinet occurred December 24 when Richard Gardiner Casey, an Australian appointed in 1942 as British Minister of State in the Middle East, was appointed Governor of Bengal.

Churchill's Popularity. In February and again in December Prime Minister Churchill was incapacitated for some weeks by attacks of pneumonia. His second illness, which followed the trying Cairo and Tehran Conferences, caused much alarm, but he recovered rapidly to the great relief of the British people and of other United Nations. The success of Churchill's war leadership was reflected in a public opinion poll taken just before Italy's surrender showing 93 per cent of those queried as approving of him as Prime Minister; 81 per cent expressed themselves as satisfied with the Government's conduct of the war. The death of Capt. Edward A. Fitzroy, Speaker of the House of Commons, on March 3, led to the election of Col. Douglas Clifton Brown (Conservative) to that post on March 9.

Party Policies. Conservative party leaders, from Churchill on down, took an active part in adjusting British home and foreign policies to the necessities of a revolutionary age. Among the Conservative rank and file there was sharp division over the role of the state in the postwar economic order with younger members showing strong sentiment for a growing measure of government participation and control. The Liberal party, at its July convention, voted overwhelmingly to refuse participation in the existing national government after the war.

The annual Labor party convention in June showed a similar inclination to withdraw from the coalition government after the war. Delegates rebuked Herbert Morrison for his policies as Home Minister by electing his rival, Arthur Greenwood, to the key post of party treasurer. A resolution passed by the convention condemned all Germans for the Reich's war crimes and aggressions. How-

ever the closely related Trades Union Congress at its convention in September blamed the Nazis rather than Germans as a whole. Both the Labor party and TUC, while moving farther to the left in their political and economic programs, again rejected proposals for affiliation with the British Communist party and with the Soviet trade unions respectively. Also see **SOCIALISM**.

The British Communist party, at its convention early in July, dropped its Bolshevik terminology and revised its rules to conform to the dissolution of the Communist International. But it adhered to the Stalinist party line, demanding the opening of a second front in 1943, abandonment of the electoral truce, freeing of the imprisoned All-India Congress leaders, full collaboration with the Soviet Union, support of a democratic anti-fascist movement in Italy, and full recognition of the French Committee of National Liberation. It was announced November 7 that Acting Capt. O. L. Uren of the British Army had been cashiered and sentenced to seven years' imprisonment by court-martial upon his admission that he had revealed highly secret official information to Douglas F. Springhall, national organizer of the Communist party. Springhall was sentenced to a seven-year term under the Official Secrets Act in July.

The new Common Wealth party, organized under the leadership of Sir Richard T. D. Acland in 1942, elected its first candidate for Parliament in an April by-election. It polled an unexpectedly heavy vote in other electoral tests. In a revolutionary manifesto issued July 7, it called upon the British people to "reject the past and begin now to build a new social order," based on common ownership of all lands, credit and investment institutions, public utilities, mines, factories, and large-scale commercial enterprises.

Fascists Released. The tiny British Fascist movement, leaders of which had been interned without trial when German invasion threatened in 1940, became a source of serious controversy during 1943. Some of its members arranged a public meeting in the Stoll Theater, London, for February 21. Home Security Minister Morrison refused demands that he ban the meeting. London anti-Fascists then called an opposition rally in front of the theater, the management of which cancelled the Fascists' meeting. Speakers at the other rally demanded the banning of all Fascist activities.

A storm of indignation arose in leftist circles when the Home Ministry released John Becket, interned Fascist leader, on October 30 and Sir Oswald and Lady Diana Mosley on November 20. Sir Oswald, founder of the British Union of Fascists, was freed on the ground of ill health. The general council of the Trades Union Council and the Labor party's national executive both condemned the Home Minister's action, but the Parliamentary Labor group voted 51 to 43 to sustain his decision. The issue was finally taken to the House of Commons which rejected 327 to 62 an amendment expressing regret at Mosley's release. Morrison pointed out that Mosley and the other interned Fascists had committed no crime under British law and had not been indicted, that Mosley was no longer a threat to the national safety, that continued imprisonment might lead to his death, and that he remained in effect under "house arrest" in a private home. Demonstrations against Mosley's release continued. Nevertheless the Home Minister on December 4 released another pro-Nazi political prisoner, C. E. Carroll, former editor of the *Anglo-German Review*.

A London court imposed a life sentence April 6

on W. F. Craven, former member of the British Union of Fascists, who was convicted of offering his services to the Reich in a letter addressed to the German Legation in Dublin.

Mobilization for War. Despite these relatively minor political controversies, the Government continued mobilization of the British people for total war with a thoroughness unequalled in any other country with the possible exception of Russia. Although two out of every three persons between the ages of 14 and 65 were either in the armed services or engaged in essential war work, Labor Minister Bevin proceeded to register women up to 50 years of age and boys and girls of 16 and 17 years of age for drafting into essential war work. On July 29 he announced that no further conscripts or volunteers would be accepted by the women's auxiliary armed services in order to free more womanpower for aircraft and munitions factories.

On September 23 Bevin told the House of Commons that more than a million men and women over 65 years of age were working full time in war industries; that over 2,500,000 women previously not engaged in manual or industrial labor had been recruited for the armed services and war plants; and that from Dec. 31, 1942, to September 23 the labor force engaged in war production had been increased by some 2,250,000 workers. He said he had to find about 700,000 additional workers during 1943-44.

Regulations authorizing the drafting of women into hospitals, schools, and institutions as cooks, maids, and cleaning women were announced by the Minister of Labor November 4. The shortage of such help was hampering the country's medical and school services. In line with the Ministry's consistent policy of providing the greatest possible safeguards for conscripted labor, Bevin at the same time promulgated Britain's first "charter" for domestic servants in such institutions. They were guaranteed minimum wages, holidays with pay, sickness benefits, and a 48-hour week.

Production Increases. The results of total mobilization for war showed in a 25-per-cent increase of production for the second quarter of 1943 as compared with the same quarter of 1942; according to Production Minister Lyttelton, aircraft output alone showed a 44-per-cent increase in structural weight. In a broadcast on July 4, Lyttelton said the British Commonwealth's war production exceeded that of Germany, Austria, and Czechoslovakia combined.

Growth of Strikes. Despite governmental appeals for a united national war effort to carry the United Nations to victory in Western Europe in 1944, there was a marked increase in strikes and labor unrest during the latter half of 1943. This unrest was attributed partly to war weariness and partly to discontent with the Government's plans for postwar reconstruction. There were 200 strikes in progress in September—a record for the war years. Of particular gravity were strikes in the aircraft industry and the coal mines. A strike involving some 9,000 workers in the important Vickers-Armstrong engineering factory at Barrow began September 17 and was not settled until October 4.

The Coal Problem. State control of coal production, higher wages for miners, and a coal rationing system had been introduced in 1942 (see 1943 YEAR BOOK, p. 291). Nevertheless strikes, slowdowns, and absenteeism among coal miners continued. On May 24 Prime Minister Churchill sent a special appeal from Washington to all coal miners to increase their output. But production for the four weeks ending August 7 was the lowest in two years, the average weekly output being 241,500

tons less than for the same period in 1942. On August 23 the Government authorized men of all ages called up for military duty to choose between the armed services and the coal mines.

The Government's decision to conscript workers for the pits struck a snag in mid-September when some 23,000 Nottinghamshire miners struck following the imprisonment of an 18-year-old surface worker who refused to take a job underground. The strike forced the release of the youth, but strikes continued to flare in the coal mines. Declining coal production and increased demand led the Minister of Fuel on October 28 to curtail still further the scanty coal rations provided for in 1942. Forced to take more drastic action to bolster production, the Government on November 30 announced the release of many British miners from the armed services to work in the mines. On December 2 Labor Minister Bevin announced in the House of Commons that beginning in January men between 17 and 25 years of age would be conscripted for work in the mines on the same basis as for military service. Meanwhile the Churchill Government had rejected demands made in Parliament for full nationalization of the coal industry.

Postwar Planning. After being brought back into the Cabinet as Lord Privy Seal, Lord Beaverbrook conferred with representatives of the Dominions, India, Newfoundland, Southern Rhodesia, and Burma in London on October 11-13 on the empire's postwar civil air policy. He announced that the conferees has reached unanimous agreement on recommendations and that if these were approved by the Dominion Governments the way would be open for an attempt to coordinate British and United States air policies. However a number of the Dominions withheld action on these recommendations pending clarification of U.S. policy.

A Government White Paper issued February 25 set forth plans for a 12-year postwar building and town-planning program to provide employment for 1,250,000 men. Adoption of a permanent military conscription program after the war was proposed by Prime Minister Churchill and other leading members of the Cabinet. Another White Paper published July 16 contained legislative proposals for sweeping reform of the British educational machinery to give all children a happier childhood and a better start in life. The Government's £80,000,000 educational reform bill, based on these proposals, had its first reading in the House of Commons December 16. Recommendations for dealing with the postwar problems of young people were set forth in still another White Paper drawn up by the Youth Advisory Council at the request of the Board of Education and published September 15.

The House of Commons on March 18 adopted, 153 to 6, a bill eliminating the old social and economic barriers to the entrance of able men of the poorer classes into the British Foreign Service. There was a particularly active discussion as to the respective roles of private enterprise and government in Britain's postwar economic life, with majority opinion supporting a large measure of government planning and control.

See ALBANIA, ARABIA, ARGENTINA, AUSTRALIA, BELGIUM, BURMA, CANADA, CHINA, EGYPT, EIRE, FRANCE, GERMANY, HUNGARY, INDIA, IRAN, IRAQ, ITALY, JAPAN, NETHERLANDS, NORWAY, POLAND, PORTUGAL, RUMANIA, SOUTH AFRICA, SPAIN, SWEDEN, SWITZERLAND, SYRIA AND LEBANON, TURKEY, UNION OF SOVIET SOCIALIST REPUBLICS, and URUGUAY, under *History*; ART; BANKS AND BANKING; BIRTH CONTROL; BUSINESS REVIEW; CHEMISTRY under *Foreign*; DAMS; FINANCIAL REVIEW

under *International Finance*; HIDES; JUVENILE DELINQUENCY; LABOR CONDITIONS; LEND-LEASE; LIBRARY PROGRESS; MILITARY and NAVAL PROGRESS; MUSIC; NEWSPAPERS; PORTS AND HARBORS; POSTWAR PLANNING under *Foreign*; RAPID TRANSIT; RECONSTRUCTION FINANCE CORPORATION; SHIPBUILDING; SOCIALISM; THEATER; UNITED NATIONS; WATERWAYS, INLAND; WORLD WAR.

RONALD STUART KAIN.

GREECE. A Balkan kingdom, occupied by German and Italian troops in April-May, 1941. Capital, Athens. Greece has an area of 50,147 square miles (mainland, 41,328; island, 8,819). The population was estimated at 7,200,000 in 1941 (7,336,000 at 1940 census). Estimated populations of the chief cities in 1939 were: Athens, 392,781; Piraeus, 198,771; Salonika (Thessaloniki), 236,524; Patras, 61,278; Kavalla, 49,980; Canea, 26,608; Corfu (Kerkyra), 32,221.

Religion and Education. School attendance in 1937-38 was: Elementary, 985,018; secondary, 92,687; university, 7,998. The American-founded Athens College, with about 500 students, was closed in October, 1940. Illiteracy remains high. The 1928 census returns showed 5,961,529 members of the Greek Orthodox Church, 126,017 Moslems, 72,791 Jews, 35,182 Roman Catholics, and 9,003 Protestants.

Production. Previous to the war about 54 per cent of the working population was supported by agriculture and fishing, 20 per cent by industry, and 8 per cent by commerce. The country was dependent upon imports for more than 25 per cent of its total food consumption and for 40 per cent of the wheat consumed. With the decline of food production due to war conditions and Axis requisitioning, Greece became progressively more dependent upon outside sources of supply. The virtual cutting off of imports by blockade, and the disruption of transportation facilities induced famine conditions beginning in 1941. Starvation became worse during the winter of 1941-42, but was later alleviated to some extent by relief supplies delivered through the International Red Cross (see preceding YEAR BOOKS and *History* below).

Wheat production declined from the prewar average of 700,000 metric tons to an estimated 500,000 tons in 1940, 300,000 in 1941, and 280,000 in 1942. Estimated yields of other crops in 1940, except as stated, were (in metric tons): Tobacco, the main cash crop, 45,000; currants, 121,775; raisins, 23,000; figs (exportable crop), 22,000; barley, 239,500; oats, 174,200; rye, 57,900; olive oil, 77,375 in 1941-42; ginned cotton, 16,900; potatoes, 163,300 in 1939; corn, 261,500 in 1939; wine, about 4,300,000 hectoliters (of 26.42 U.S. gal.) in 1939.

Factory production in 1938 (excluding wine, olive oil, and wheat products) was valued at 13,552,000,000 drachmas. Mineral output (in metric tons) in 1938 except as otherwise indicated was: Iron ore (metal content), 150,000; pyrites, 217,000; lignite, 139,000 (205,000, estimated, in 1942); manganese, 5,000; lead, 3,100; zinc, 5,300; chrome, 22,000; nickel-cobalt, 1,300.

Foreign Trade. No official trade statistics have been published since June, 1941. According to the Axis-controlled Greek press, imports in the calendar year 1941 total 4,840,000,000 drachmas (12,215,326,000 in 1940) and exports 3,904,000,000 drachmas (9,079,380,000 in 1940). Chief sources of 1941 imports (millions of drachmas): U.S.S.R., 673; Germany, 544; United Kingdom, 354; others, 3,269. Distribution of exports (in millions): To

Germany, 1,825; U.S.A., 904; United Kingdom, 486; Italy, 141; others, 548. The 1941 exports included (metric tons): Dry raisins, 30,800; tobacco, 21,100; olive oil, 2,000; wine, 3,800. Imports included (metric tons): Wheat, 198,000; barley, 17,000; rice, 12,000; sugar, 10,000; coal, 45,000; mineral oils, 97,000.

Finance. The puppet government at Athens reported revenue receipts of 8,315,000,000 drachmas for the fiscal year ended Mar. 31, 1942, compared with an estimated 14,519,000,000 in 1938-39. A total increase of revenue amounting to 10 billion drachmas was indicated for 1942-43. Estimates of the cost of occupation levied on Greece varied from 18 to 180 billion drachmas annually, the latter figure including credits extended to the Axis countries by the puppet regime in Athens. Bank loans, bond issues, and large-scale printing of currency were resorted to to meet the government's expenses.

German exactions and rapidly spreading inflation boosted the public debt far above the 95-billion-drachma level reported for Sept. 30, 1940. The average exchange rate of the drachma was \$0.0082 in 1939. German authorities fixed the official rate at 1 drachma equals 0.0167 reichsmarks, or \$0.0067 (based on the German official rate for the U.S. dollar). The quotation for the pound sterling, which was 1,500 drachmas before the German occupation, was reported at 42,000 drachmas in April, 1942, and 130,000 drachmas in July, 1942. See *History*.

Transportation. In 1940 Greece had approximately 1,864 miles of railways, 8,440 miles of highways, air connections from Athens to most of the principal European cities, and a merchant fleet of some 607 vessels (of 100 tons or over) aggregating about 1,780,700 gross tons. Much of the transportation and communication network was disrupted or destroyed by the Italo-German invasions of 1940-41. Half the merchant marine was destroyed or captured at the same time. The remainder (about 200 ships of 1,000,000 tons manned by 6,000 sailors) entered the service of the Allies under British direction.

Government. Premier John Metaxas administered Greece as a dictatorship from Aug. 4, 1936, until his death on Jan. 29, 1941. The government remained a monarchy in form under King George II, who had been restored to the throne Nov. 25, 1935, in accordance with a plebiscite, to rule under the Constitution of 1911. King George signed the 1936 decrees which suspended constitutional guarantees, dissolved Parliament, abolished political parties, and imposed strict control over the press and other means of communication. Thereafter, all legislation was enacted by royal decree.

Italian forces invaded Greece Oct. 28, 1940. They were driven out by the Greek army, which advanced and occupied one-third of Albania by Apr. 6, 1941, when the German invasion of Greece began. The Greek forces were defeated and a British expeditionary force expelled from the Greek mainland (late in April) and from Crete (late in May). Premier Alexander Korizis, who succeeded Metaxas, committed suicide Apr. 18, 1941. A new Government was formed by Emmanuel Tsouderos April 21. King George and the members of the Tsouderos Cabinet left Athens Apr. 22 and withdrew from Crete May 23. After a temporary stay in Cairo, Egypt, the Government-in-Exile was transferred to London, effective Sept. 22, 1941.

According to a resolution passed by the Greek National Assembly Oct. 10, 1935, the 1911 Constitution was to remain in force until the enactment of a new Constitutional Charter. King George on

Oct. 22, 1941, issued a royal decree regulating the functions of state authorities in cases in which the 1911 Constitution could not be fully applied owing to the absence of the Government from Greece. A pro-Nazi puppet regime headed by Gen. George Tsolakoglu was established in Athens Apr. 29, 1941. Tsolakoglu resigned Nov. 23, 1942, and was succeeded by Professor Logothetopoulos. For war declarations, see table under WORLD WAR. For developments in 1943, see below.

HISTORY

Axis Grip Weakened. Allied victories in the Mediterranean area during 1943 brought the promise of early liberation to war-ravaged Greece. Mussolini, instigator of Fascist Italy's treacherous and unprovoked attack on Greece in October, 1940, was overthrown July 25. His successor, Premier Badoglio, capitulated to the Allies on September 7 and in mid-October joined them in the struggle against Germany. The Italian Government thereby renounced its claims to conquered Greek territories (see 1943 YEAR BOOK, p. 296) and terminated its military occupation of large parts of Greece.

Immediately after Mussolini's fall, German forces disarmed the large Italian garrison at Larissa, strategically important Greek city commanding the Thessalian plain. The day before the announcement of Italy's withdrawal from the war they began disarming other Italian troops in Greece and seized control of all Italian-occupied territories except the island of Samos in the Aegean. There the Italian forces that had occupied the island in 1940 turned over the administration to Greek authorities representing the Government in Exile. British and Greek units of the Allied Middle East Command immediately occupied Samos and the neighboring Italian Aegean islands of Kos and Leros. In November, however, the Germans succeeded in capturing all three islands.

Some of the Italian units in Greece resisted the German attempt to disarm them, but were soon overcome. Others gave away their arms and equipment to Greek guerrillas and civilians in exchange for civilian clothes. Still others fled to the hills to join the Greek guerrillas. But the great majority of the Italian troops were disarmed without difficulty and later sent back to that part of Italy under German control. Meanwhile the Germans intensified their preparations to repel an Allied invasion of Greece. Thousands of Greeks were forced to work on coastal fortifications. According to Istanbul reports, a state of siege was declared in Crete and all southern Greek ports early in May. More German and Bulgarian troops were sent to garrison Greece and late in July all of Greek Macedonia except a small section around Salonika was reportedly placed under Bulgarian rule.

From their newly established airfields and ports in southern Italy, the Allies in the last quarter of the year launched repeated air and sea attacks upon German bases and installations in Greece. By ship and plane they sent arms and supplies and British and American officers to the aid of Greek guerrillas. There were amphibious attacks upon German defenses, such as the raid by British units on the night of July 4 that destroyed a number of German planes and fuel dumps in Crete.

Guerrilla Warfare. The foregoing developments, combined with the growing harshness of Axis rule and particularly the drafting of Greeks for forced labor in Greece and Germany, gave added momentum to the guerrilla warfare against the occupation forces that had developed on the Greek mainland and on some of the Greek islands during

1941-42. There was a steady expansion in the number of guerrillas, in the quantity of their military equipment, and in their anti-Axis activities. In May the Greek Government reported that 50,000 armed guerrillas were active in the mountainous districts and that "sea guerrillas" had seized a small fleet of Axis vessels and were using them to harry Axis coastwise shipping. Other estimates placed the number of guerrillas at 30,000.

Early in September British staff officers returned to Cairo after conferring with guerrilla leaders in Greece and Yugoslavia. A *New York Times* dispatch of September 7 from Cairo stated that Greek guerrilla activities had been unified under the direction of Lieut. Gen. Sir Henry Maitland Wilson, Allied commander in the Middle East, as a result of an agreement signed by guerrilla leaders and a British general representing Wilson on July 20. At the command of General Wilson, Greek guerrillas carried out a 20-day offensive against Axis forces in Greece as a diversion to assist the Allied invasion of Sicily. The guerrillas were particularly effective in disrupting railway traffic and other German communications. British liaison officers were said to be operating with each of the principal guerrilla bands, which the Greeks called *Andartes*.

By the latter part of 1943 these gradually expanding guerrilla forces were said to be in control of most of Greece, with the exception of the larger towns and communications lines. They governed the areas under their control with the aid of locally elected councils and committees. However the guerrillas were divided into three large rival groups and into many small independent bands. According to a *New York Times* dispatch of October 17 from Cairo, the strongest of the guerrilla organizations was the Greek National Liberation Front, known as the E.A.M.; its armed forces were called the Popular Liberation Army, or E.L.A.S. Both the E.A.M. and E.L.A.S. were described as comprising all sorts of Greek patriots but as being "largely directed by the Greek Communist party." Athanasios Klaras, former Communist deputy in the Greek Parliament, was the dominant force in the movement.

The principal rival of the National Liberation Front was the Greek National Democratic Army, known as E.D.E.S., commanded by a former Greek army colonel, Napoleon Zervas, who assumed the title of general. His organization was strong in Epirus and Thessaly. It had no well-defined political program beyond ridding Greece of the Germans. A third group, the National and Social Liberation movement, or E.K.K.A., under the command of a Colonel Psarros, was active in central Greece and the Peloponnese. These rival guerrilla leaders were brought together by the British military mission referred to above. In the agreement signed with the head of the mission on July 20 they undertook to act in concert and avoid conflicts in order to intensify pressure against the Axis.

Outbreak of Civil War. As the prospect for early liberation of Greece improved, however, rivalry between the guerrilla organizations was intensified. On October 9 civil warfare broke out between the Communist-led E.L.A.S. forces and the E.D.E.S. under General Zervas. According to C. L. Sulzberger, *New York Times* roving correspondent, "the Communist-led organization, fearing the Germans might evacuate before it had established its full powers, ordered its armed forces to attack rival guerrilla units with the purpose of seizing control and thereby present to the Allied armies, when they arrive(d), a fait accompli."

He reported that the E.L.A.S. had eliminated much of the strength of Colonel Psarros's E.K.K.A. organization in quarrels that broke out in August. The Communist-led forces then succeeded in securing the major portion of the arms which Greek guerrillas seized from Italian troops at the time of the Italian armistice. Soon afterward they surrounded and disarmed a number of E.D.E.S. bands engaged in recruiting in Thessaly and western Macedonia. Then on October 9 they launched a surprise attack upon the main supply base of General Zervas's E.D.E.S. forces, seized most of the latter's military equipment, and drove them back into the arms of German forces that had been attacking the Zervas units from another direction.

Zervas was said to have recovered much of the lost territory, but his forces were considerably weakened in the fighting against both Germans and E.L.A.S. Partisans that continued until severe winter weather in mid-December forced a lull. Colonel Psarros's E.K.K.A. group appears to have remained on the sidelines in the struggle between the Zervas and Communist-led forces. On October 21 General Wilson broadcast an appeal to the Greek patriot groups to cease their "useless and fratricidal strife." He warned that the Germans were trying to weaken the Greeks by promoting internecine conflicts. But neither this appeal nor the mediatory efforts of British and American liaison officers in Greece effected a reconciliation of the rival guerrilla movements up to the year's end.

Resistance to Axis Rule. Internecine strife intensified the agony of the Greek civilian population. But though scourged by hunger, disease, and the brutalities and economic exactions of the Axis occupationary forces, the Greek people continued their stubborn resistance to enemy rule. Civilian sabotage of Axis railways, ammunition dumps, and factories was on the increase, according to reports reaching the Allied world. Each act of sabotage and each attack by Greek patriots upon Axis soldiers was punished by the wholesale execution of hostages. Among 15 hostages shot early in 1943 in reprisal for an explosion aboard a German ship in the port of Piraeus was Thanos D. Skouras, nephew of the well-known Greek-American moving picture executives of the same name. The death penalty was proclaimed for Greeks aiding the guerrillas or Allied soldiers and harsh punishment was meted out for lesser offenses.

The Greek Government-in-Exile on March 24 declared that 20,000 Greeks had been slaughtered by occupationary forces. The Bulgarians were accused of murdering 15,000 persons in Thrace and Macedonia, while Germans and Italians were said to have executed 3,000 Cretans in reprisal for guerrilla activities and shot 2,000 Greeks in various parts of the mainland. Speaking for the British Government in the House of Commons March 24, Richard K. Law, Under-Secretary of the Foreign Office, said the Bulgarian Government was systematically seeking to nationalize occupied Greek territories and expelling many of the inhabitants to make room for Bulgarian immigrants. The measures of expropriation, he declared, were null and void in the view of the British Government and would "have to be undone at the end of the war."

New massacres and deportations in the Bulgarian-occupied regions provoked a general strike of protest in Athens on June 25. Anti-Axis demonstrations in Athens and other towns were broken up by occupationary forces, which fired on the demonstrators. There were numerous arrests and executions. During the last months of the year German terrorism became more extreme as the

danger of an Allied invasion mounted. Cairo reports said that in August 50 hostages were shot in one Greek village in reprisal for the assassination of a German soldier. About the same time 93 Salonika residents were executed as a warning against further sabotage. During the last quarter of the year the Germans reportedly made a systematic effort to root out guerrilla activities in areas adjacent to their lines of communication. Village after village was burned, and the occupants were arrested, shot, or driven into the hills. The Greek Department of Information in Cairo claimed that more than 100,000 Greeks were made homeless in this fashion.

The famine, which caused an estimated 100,000 deaths in Athens alone in 1942, was alleviated during the first part of 1943 by Allied and neutral relief shipments passed through the British blockade. However food conditions became worse again in the autumn as a result of Axis looting and burning and the spread of armed hostilities. At the end of October Greek authorities in London reported that 2,500,000 of some 7,000,000 people in Greece depended upon the Red Cross for sustenance. By the autumn of 1943 inflation had reached fantastic levels and the drachma had become virtually worthless, there being some 20 times the prewar total of paper money in circulation. The nominal sterling rate for the drachma was reported on August 1 at about 1 pound to 20,000 drachmas as compared with 1 to 550 before the war.

New Puppet Premier. A further change in the puppet Greek government established by the Nazis in Athens was announced by D.N.B., the official German news agency, on April 7. The administration headed by Prof. George Logothetopoulos resigned. Jean Rhallis, Greek politician, formed a new Cabinet in which he held the posts of Prime Minister, Minister of Defense, and Minister of Supply. On December 30 the Greek Government-in-Exile deprived all Greeks who had accepted ministerial posts in the puppet government of their citizenship, military rank, and positions in the public service.

Government-in-Exile. The prospect of the early liberation of Greece produced new tensions and important changes in the plans and composition of the Greek Government-in-Exile. Though composed of Greeks of varying political color, the Cabinet had heretofore subordinated most of its partisan differences to the task of liberating the homeland, regaining the territories annexed by Axis nations, and working out a federative alliance with Yugoslavia and Turkey that would safeguard Greece's future position in southeastern Europe. The Government also pressed Greece's claim to the Italian Dodecanese Islands and to a section of southern Albania including the towns of Koritza and Argyrocastron. It further indicated a desire to win the cession of Cyprus, with its partly Greek population, from Britain.

The Greek Government was consulted by the Allies in formulating the terms of the Italian surrender. Immediately thereafter Premier Tsouderos publicly demanded the cession of the Dodecanese Islands to Greece and participation by Greek officials in any interim Allied administration. The Allied acceptance of the Badoglio Government as a co-belligerent in mid-October was done over Greek protests and provoked a violent reaction. Premier Tsouderos on October 14 declared that Greece would be "within her right" in refusing to abide by a decision contrary to her national interest but that the Government would raise no further ob-

jection to Italian co-belligerency. Nevertheless members of the Cabinet expressed the Greek feeling of hurt pride by offering their resignations to the Premier the same night. He refused to accept them.

The long-standing monarchist-republican controversy, basic to Greek politics since the split between Premier Venizelos and King Constantine in World War I, was revived in the spring of 1943 when Allied victories in Tunisia presaged an early invasion of southern Europe. The first major break in the Government-in-Exile came on March 6 with the resignation in Cairo of Panayiotis Canellopoulos, a republican and former anti-Axis underground leader who became Vice Premier and Minister of Defense in May, 1942, following his escape from Greece. No reason was given for the resignation except a statement by Canellopoulos that he could be more useful outside the Government.

On March 15 King George II and Premier Tsouderos arrived in Cairo from London by plane. A few days later the King accepted the resignations of Under-Secretary for Navy Adm. E. Cavadias, Under-Secretary for Air and Army Gen. P. Nicolaides, Minister of Education E. Sekeris, and the commander in chief of the Greek Fleet, Vice Adm. A. Sakellariou. The Cabinet posts vacated by these men and Canellopoulos were filled as follows on March 24: Vice Premier and Minister for Navy, George Roussos; Minister for Army and acting Minister for Air, Byron Karapanyiotis; Public Welfare, Emmanuel Sofoulis. The following day it was announced that King George, Premier Tsouderos, and the Ministries of Army, Navy, and Foreign Affairs had moved their headquarters to Cairo from London preliminary to the return of the King and Government to Greece in the wake of Allied armies. Only the Ministries of Information, Shipping, and Finance remained in London. A decree issued at the same time promised military pensions to the families of Greeks who were killed by Axis forces or who perished of hardship and privation.

Further Cabinet changes were announced later. On May 8 Sophocles Venizelos, son of former Premier Venizelos, assumed the post of Minister for Navy in Cairo. On June 26 K. Varvaressos resigned as Minister of Finance to become ambassador at large on economic and financial matters in Great Britain and the United States. Premier Tsouderos took over the Finance Ministry.

Meanwhile Premier Tsouderos, in a speech to veterans of the Greek War at Alexandria on April 20, promised that "when the Greek flag is again hoisted over Athens our duty will be to resign our mandate to govern so that a comprehensive coalition government may be formed, including all the national forces, those already existing as parties as well as the fighting organizations. . . ."

Subsequent broadcasts to Greece by King George and members of the Government in Cairo indicated disquiet at the controversy that had developed in Greece over the question of the monarchy and the future policy of the Government. On July 4 the King broadcast the following pledge: ". . . as soon as the security of our country warrants it and military considerations allow, free general elections will be carried out for a constituent assembly. These elections will be held within six months (after liberation) as already decided by my Government. . . . I shall be the first to respect (the elections). . . . All the laws of the 1911 constitution bearing on this subject are in force and will remain so until the Greek people expresses its sovereign will. As soon as it is pos-

sible to transfer the seat of the government to Greece the members of the present Government . . . will hand them their resignations. Thus a new government will be formed fully representative of all the associations and currents of the country's public opinion. This government will be made up by leaders whose presence will guarantee freedom and orderly elections."

On July 5 all members of the Cabinet in Cairo endorsed the King's promise to abide by the people's electoral decision on the republic-monarchy issue. Their declaration also made it clear that whatever the future regime, it would be based on popular consent and operate through democratic institutions.

The British Foreign Secretary, Anthony Eden, who had been working to compose political differences among the Greeks, publicly commended these declarations. Nevertheless they did not dispel distrust of the King arising from his acquiescence in the Metaxas dictatorship of 1936-41. Representatives of the leading guerrilla organizations arrived in Cairo August 10 to inform Allied military authorities that they opposed the return of King George to Greece in advance of a plebiscite to determine the country's future government. A similar declaration was made to the Greek Government a week later by the more conservative underground leaders of all the Greek parties belonging to the prewar Democratic Coalition. The Greek Cabinet was reported to have unanimously endorsed this position.

The King declined to accept this condition. But in response to growing pressure from the Greek Cabinet, the British Government, and even of some monarchist elements within and without Greece, he wrote a letter to Premier Tsouderos on November 8 stating that when Greece was liberated he would "examine anew the question of the time of my return to Greece." This qualified promise was declared unsatisfactory to the warring guerrilla factions in Greece. Indeed the Communist-led E.A.M. insisted that national elections for a constituent assembly should be held under its own supervision. The controversy over the King was reported to have caused some disturbances among the Greek armed forces in the Middle East.

See BULGARIA, GREAT BRITAIN, HUNGARY and ITALY; NAVAL PROGRESS; WORLD WAR.

GREENLAND. The world's largest island, situated off the northeastern coast of Canada and forming the only colonial possession of Denmark. Area, 736,518 square miles, of which all except 131,924 square miles along the southern, eastern, and western coasts is capped with a thick layer of ice. Estimated population in 1943, about 500 Danes and 18,000 native Greenlanders. The chief settlements are Julianehaab (about 700 inhabitants), Godthaab (800), Sukkertoppen (800), Kutdligssat (700), Godhavn, and Angmagssalik. The whole population professes the Lutheran faith. The natives speak an Eskimo dialect, while the language of the Europeans and some natives is Danish. In addition to grade schools, there are high schools in two of the chief settlements and a teachers' training school in Godthaab.

Production, etc. The most important export product is cryolite, a mineral used in the manufacture of aluminum. Exports in 1941 were about \$4,000,000, with cryolite accounting for nine-tenths of the total. Some graphite, copper, asbestos, and mica is exported, and coal is mined for local use. Other exports are blubber, liver, skins, hides, eider down, bird feathers, and fish. There are a few sheep and

goats, but no agriculture. Commerce is a monopoly of the Danish Government and its representatives in Greenland. Governmental revenues (4,810,000 Danish crowns in 1938) come mainly from royalties on cryolite production and to a small degree from the profits on the Government's trade monopoly.

Government. Normally the administration and trade of Greenland is controlled by a department of the Danish Government in Copenhagen, with a director directly responsible to the Prime Minister. For local administration, the habitable sections of Greenland are divided into three provinces as follows: South Greenland on the southwest coast (pop., about 9,000; capital, Godthaab); North Greenland on the west coast (pop., 8,000; capital, Godhavn); and East Greenland on the east coast (pop. about 1,000). North Greenland and South Greenland each have a provincial council, elected from the members of the municipal councils in each district. The provincial councils meet every other year under the presidency of the Chief Administrator for each province.

After the German occupation of Denmark on Apr. 9, 1940, contact between Denmark and Greenland was cut off. The two Chief Administrators established a temporary capital for all Greenland at Godthaab and carried on the government with the assistance of the provincial councils and the Danish Minister in Washington. The provincial councils, meeting at Godhavn on May 3, 1940, affirmed their allegiance to King Christian X of Denmark. Acting independently of the German-dominated Government in Copenhagen, the Danish Minister in Washington on Apr. 9, 1941, signed an agreement placing Greenland under the military protection of the United States for the duration of the war (see 1942 YEAR BOOK, p. 255). The U.S. Government proceeded to construct an air base and other defense installations in Greenland, costing an estimated \$20,000,000. Since October, 1941, the trade of Greenland has been handled by a special section of the Danish Consulate General in New York.

History. Early in 1943 Danish hunters serving as a U.S. Army sledge patrol discovered a small German landing party which had established a secret radio and weather-reporting base on a remote island off the uninhabited coast of Greenland. The Germans killed one member of the patrol and captured two others. The remainder escaped and gave the alarm. The Germans then attacked and demolished a small Danish hunting and weather-reporting station well above the Arctic Circle, but most of the Danish occupants escaped. The lieutenant in command of the German party later induced a captured Dane to assist him in exploring the Greenland coast. While on this mission, the Dane overpowered the German and after a 40-day sledge trip delivered him to the American military authorities.

Meanwhile U.S. military planes under the command of the noted flier, Col. Bernt Balchen, destroyed the German base and supply ship in a bombing attack during May. Two U.S. Coast Guard cutters set out for the base as soon as ice conditions warranted, carrying American troops. Reaching the site in September, they found it deserted but captured one lost Nazi technician. The cutter sighted German reconnaissance planes on three occasions, indicating that another enemy base existed somewhere in the region.

GRENADA. See WINDWARD ISLANDS.
GROUP INSURANCE. See INSURANCE.

GRUMMAN F4F, F6F, TBf. See **AERONAUTICS** under *Types*.

GUADALCANAL. See **BRITISH SOLOMON ISLANDS**; **PSYCHIATRY**; **WORLD WAR**.

GUADELOUPE. A French West Indian colony consisting of two main islands—Guadeloupe proper (Basse-Terre) and Grande-Terre—and the dependent islands of Désirade, Les Saintes, Marie Galante, St. Barthélemy, and St. Martin (northern part only). Total area, 688 square miles. Population (1939 estimate), 310,000. Chief towns: Basse-Terre, capital (13,638 inhabitants), Pointe-à-Pitre (43,551). Chief products—sugar, coffee, rum, cacao, logwood, bananas, manioc. Trade (1938): imports 250,583,000 francs; exports 296,472,000 francs. Budget (1939): 83,608,979 francs (revenue and expenditure balanced). Public debt (Dec. 31, 1938), 12,110,210 francs (franc averaged \$0.0288 for 1938; \$0.0251, 1939). Roads (1940): 754 miles. For *Government and History*, see **MARTINIQUE**.

GUAM. The island of Guam was ceded to the United States by Spain at the close of the Spanish-American War in 1899. It was occupied by Japanese armed forces on Dec. 12, 1941. Guam, largest and most populous of the Mariana Islands group, is situated in the mid-Pacific, 1,500 miles east of Manila, 1,300 south of Japan, 3,337 from Honolulu, and 5,053 from San Francisco. Land area, 206 square miles, extending 30 miles north and south, and from 4 to 8½ miles wide; estimated population (July 1, 1941), 23,394, which included 21,502 native-born, 812 foreign-born, and 588 members of the naval establishment. The 1940 census population was 22,290 (18,509 in 1930). Capital, Agaña, 12,553 inhabitants in 1941.

The native population is mainly of Chamorro stock, a mixture of the ancient Chamorro people with Spanish, Mexican, Anglo-Saxon, Japanese, and Chinese strains. Under American rule English was used in the schools and in business. Chamorro, the native tongue, was spoken at home. Instruction in public schools was available for all children through the sixth grade. Admission to the seventh, eighth, and ninth grades was limited by competitive examination to 70 pupils per year. High school opportunities were generally for the purpose of teacher training. Enrollment in the public schools in 1940-41 averaged 5,084 and the teachers were Chamorros. An American school, supported largely by tuition fees, was maintained for children of the Naval personnel. Copra is the most important export crop, but small revenues are derived from shipments of alligator pears and kapok. Products grown for local use consist of sweet potatoes, rice, corn, coffee, taro, eggplant, red peppers, and tropical fruits. Trade (year ended June 30, 1941): \$994,010 for imports and \$84,278 for exports.

During the 40 years of American possession the people had acquired to a considerable extent the American language, manners, and outlook. Guam was a U.S. naval station; its Governor and Commandant of the station was a naval officer appointed by the President. Although the people were not American citizens they were United States nationals and ruled by a civil code established by the Governor. The Governor had both executive and legislative powers. The Guam Congress consisted of a House of Council (16 members) and a House of Assembly (27 members) with authority only to advise the Governor. Planes of Pan American Airways operating between Alameda, Calif., Manila, and Hong Kong stopped regularly at Guam

before the extension of war to the Pacific. A cable station on the island relayed messages between San Francisco and the Philippines, China, and Japan. See **JAPAN**.

CHARLES F. REID.

GUATEMALA. A republic in Central America. Capital, Guatemala City.

Area and Population. Area 48,290 square miles; population, 3,284,269 at census of Apr. 7, 1940. Some 65 per cent of the population are Indians and the bulk of the remainder are mestizos. There were about 45,000 foreigners. The small ruling class is largely of European origin. Poulations of the chief cities with their suburbs in 1940 were: Guatemala City, 176,780; Quezaltenango, 30,125; Cobán, 26,774; Zacapa, 18,094.

Defense. Military service is compulsory. As of Jan. 1, 1941, there were 40,566 men in the land and air forces of the country, including 34,808 trained reserves. Under an agreement signed May 27, 1941, a U.S. Army officer was detailed to serve as Director of the Polytechnic School (Guatemalan military academy). A Civic Guard, composed of volunteers of 50 to 60 years, was created in 1942.

Education and Religion. About 80 per cent of the adult inhabitants are illiterate. In 1940 there were 142,335 pupils in 2,485 primary schools, 5,574 in 28 secondary schools, and 694 in the University of Guatemala. On Mar. 1, 1943, the President reported that 2,691 schools were operating, or 71 more than the previous year. He said that in the year ending Mar. 1, 1943, 51,246 children and adults were taught to read and write (48,116 in schools). The population is predominantly Roman Catholic, but others enjoy freedom of worship.

Production. Coffee and bananas make up about 90 per cent of all exports. The chief crops in 1940-41 were: Coffee, 1,100,785 quintals (of 101.4 lb.); bananas, 7,151,593 stems; sugar, 22,766 short tons in 1941-42; also corn, wheat, beans, rice and plantains. Exports of coffee for the period Oct. 1, 1941, to Sept. 30, 1942, totaled more than 100,000 tons. The 1942 livestock population was: Cattle, 630,256; horses, mules, and asses, 148,454; sheep and goats, 477,190; swine, 289,887. This represented an increase of almost 100 per cent since 1930. Other products include chicle (1,769 short tons exported in 1942), gold, chromite, salt, honey, cattle hides, rubber, cotton, coconuts, sulphur, and hardwoods. The United Fruit Co. began abaca cultivation on abandoned banana plantations in 1942. Industrial establishments consist mainly of coffee-cleaning, sugar-refining, and flour mills, and shoe, soap, and pottery factories.

Foreign Trade. Imports in 1942 totaled \$13,672,000 and exports \$20,437,000 (\$13,415,756 and \$14,505,000, respectively, in 1941). The United States supplied about 70 per cent of the 1942 imports and took over 90 per cent of the exports by value. Value of the chief 1941 exports: Coffee, \$6,557,478; bananas, \$4,258,119; chicle, \$1,013,725.

Finance. Budget estimates for the fiscal year ended June 30, 1943, balanced at 10,033,000 quetzales (1 quetzal equals 1 U.S. dollar), as compared with 10,223,000 quetzales in 1941-42. The public debt was reduced during 1942 to a total on December 31 of 3,877,134 quetzales (internal) and £1,520,432 (external). Redemption of the foreign debt, suspended in 1932, was resumed in 1940.

Transportation. Guatemala's 737 miles of railway line were connected with the Mexican and U.S. railway networks in 1942 by the completion of the Suchiate River bridge between Mexico and Guate-

mala. The Guatemala branch of the International Railways of Central America carried 650,622 tons of freight and 1,506,214 passengers in 1941. Highways extended 4,205 miles on Dec. 31, 1942. The pioneer road for the Inter-American Highway was completed across Guatemala in 1942. The republic is served by domestic and international air services.

Government. The Constitution of Jan. 1, 1923, as amended, provides for a President elected for 6 years and ineligible for reelection, a single-chambered National Assembly of 74 members elected by popular vote for 4 years, and an appointive Council of State of 7 members which supervises public contracts and concessions. President in 1943, Gen. Jorge Ubico, who assumed office Feb. 14, 1931, and had his term extended by a hand-picked Constituent Assembly on July 10, 1935, to Mar. 15, 1943. A similar Constituent Assembly on Sept. 11, 1941, reelected Ubico for the 1943-49 term. Guatemala declared a state of war with Japan December 8, and with Germany and Italy Dec. 11, 1941. For 1943 developments, see below.

History. Political conditions remained stable and economic conditions relatively satisfactory throughout 1943. That the alert Dictator-President, General Ubico, was not taking any chances on a possible military coup against his Government was indicated by developments in the spring. On April 30 a Presidential decree deprived the War Ministry for the duration of the war of its powers of inspection of the armed forces and placed this function in the hands of an Inspector General named by the President. This was followed on May 14 by the announcement that Ubico had appointed a new Minister of War, Gen. Pedro Zamora Castellano, and had named Gen. José Reyes as Inspector General of the Army.

Continuing his close wartime collaboration with the United States, the President extended the measures against Axis nationals taken in 1942. In March 105 German women, children, and men over military age were repatriated from Puerto Barrios on a Spanish ship. The Government continued its acquisition of German-owned plantations and on October 30 expropriated the German-owned Verapaz Railway, connecting Puerto Barrios with rich coffee lands in the interior. Other decrees levied new taxes on exports of cinchona bark, honey, and wax from Axis-owned plantations. A tax of 50 cents per 100 lb. of coffee grown in Axis plantations was imposed in 1942.

Effective in May, the U.S. and Guatemalan Governments exchanged Ambassadors instead of Ministers. At the request of the Guatemalan Government, the U.S. Government contracted on July 17 to detail a lieutenant colonel in the U.S. Army to serve as director of the Polytechnic School of Guatemala. In October the United States stopped work on the pioneer road along the route of the Inter-American Highway on which work was begun in 1942. The Guatemalan Government then undertook to finish the uncompleted sections of the 200-mile road project in accordance with the U.S. Army engineers' plans and specifications.

A commission of United States sanitary experts studying conditions along the Inter-American Highway arrived at Guatemala City June 24. On August 3 it was announced that the headquarters of the Pan-American Sanitary Office for the Caribbean area would be transferred from Panama to Guatemala. This decision was influenced by the allocation to Guatemala in August, 1942, of \$750,000 by the Institute of Inter-American Affairs, a United States agency controlled by the Coordinator of Inter-American Affairs at Washington, for a

cooperative public health program. Not more than \$500,000 of this sum was to be expended for the construction of a hospital. A new tri-weekly air service opened June 13 brought Guatemala City within 5½ hours of New Orleans.

Economically, Guatemala benefited as a result of the war. Successive large crops of high-grade coffee were sold in the United States at top prices. Trade with Mexico increased as a result of the opening of the Suchiate River railway bridge in 1942. United States war contracts for rubber, abaca, and other products, expenditures by United States military units stationed in Guatemala, and funds advanced by Washington for highway construction, sanitation, etc., helped to maintain full employment. Moreover, the Government took effective steps to meet the danger of inflation through a program of price control and wage ceilings. During 1943 the President imposed minimum wages in certain industries and ordered all plantations to produce articles of prime necessity.

See COSTA RICA under *History*; SPANISH-AMERICAN LITERATURES; WORLD WAR.

GUERRILLA WARFARE. See ALBANIA, CHINA, FRANCE, GREECE, HUNGARY, NORWAY, PHILIPPINES, POLAND, and YUGOSLAVIA, under *History*; WORLD WAR.

GUGGENHEIM MEMORIAL FOUNDATION. See PHILANTHROPY under *Foundation Activities*.

GUIANA. See BRITISH GUIANA, FRENCH GUIANA, SURINAM.

GUINEA, Portuguese. See PORTUGAL under *Colonial Empire*.

GUNS. See the topics listed under MUNITIONS, especially PHYSICS for the Electrical Fire Director.

GYMNASTICS. The national A.A.U. championships, held in New York in May, provided a fitting climax for an interesting year in gymnastics. Arthur Pitt, veteran from the Swiss Society of Union City, N.J., again dominated the men's division, retaining the all-around title with victories in calisthenics and on the horizontal bar and side horse. Mrs. Pearl Perkins Nightingale of Philadelphia kept the women's all-around crown, taking three of the four tests that figured in the scoring for that title.

Penn State, which also won the Eastern intercollegiate championship, captured the A.A.U. team title. Chuck Lebow, Lions' star, set a new world mark of 0:03.8 in the 20-foot sitting rope climb in the college meet in which he also took laurels on the horizontal bar.

THOMAS V. HANEY.

GYPSUM. See BUILDING MATERIALS.

GYPSY MOTH. See INSECT PESTS.

GYRO FLUX GATE COMPASS. See ELECTRICAL INDUSTRIES.

HABEAS CORPUS. See HAWAII under *History*; LAW under *War Decisions*.

HADHRAMAUT. See ARABIA under *Aden Protectorate*.

HAITI. A West Indian republic, occupying the western third of the island of Haiti or Hispaniola. Capital, Port-au-Prince.

Area and Population. Area, 10,700 square miles; population, estimated, 2,663,000 (1,631,000 at 1918 census), exclusive of white foreign residents. With the exception of some 3,000 white foreigners and a few thousand mulattoes, the inhabitants are all Negroes. Estimated populations of the chief cities in 1942: Port-au-Prince, 125,000; Cap-Haitien, 20,000; Gonaïves, 20,000; Aux Cayes, 15,000;

Saint Marc, 10,000; Jacmel, 10,000. French is the language of government and the educated class. The peasants, comprising more than 80 per cent of the population, speak Creole French.

Education and Religion. About 85 per cent of the people are illiterate. Education in primary schools is nominally compulsory for children between the ages of 7 and 14. There are about 1,060 primary schools with 87,000 pupils (33,000 girls); 6 national lycées and 15 private secondary schools, with 6,000 pupils; 60 farm schools for boys and 8 urban vocational schools for boys and girls, with 12,200 pupils; 2 normal schools; and schools of medicine, law, applied science, and agriculture for higher education. Most of the inhabitants profess the Roman Catholic faith.

Defense. The armed constabulary, organized by United States officers during the American military intervention (1915-34) and since 1934 under Haitian command, has about 4,533 officers and men. A United States military mission was contracted for by the Haitian Government in 1938 to reorganize the military school and act as technical advisors to the general staff of the Garde d'Haiti (constabulary). Arms include a limited number of coast defense guns, a few airplanes, and six coast-guard vessels.

Production. Agriculture supports the mass of the population. The country's prosperity is largely dependent upon export crops, chiefly coffee. For the fiscal year ended Sept. 30, 1943, the principal exports were: Coffee, 15,936,187 kg. (1 kilogram equals 2.2 lb.) valued at 17,660,210 gourdes (1 gourde equals U.S. \$0.20); sisal, 10,740,045 kg. valued at 9,872,468 gourdes; raw sugar, 11,534,422 kg. valued at 3,373,835 gourdes; raw cotton, 2,001,899 kg. valued at 2,148,929 gourdes; bananas, 603,695 stems valued at 1,148,689 gourdes; cacao, 1,764,353 kg. valued at 1,278,347 gourdes. Lignum vitae, corn, logwood, cottonseed cake and meal, goatskins, rum, and cashew nuts were other exports. See *History* for the agricultural program initiated with U.S. financial aid in 1942 and 1943. Manufacturing is confined to sugar refining, rum distilling, and the preparation of tobacco products, canned fruit, and vegetable lard.

Foreign Trade. For the year ended Sept. 30, 1943, imports were valued at 49,202,000 gourdes (42,285,000 in 1941-42) and exports at 53,073,000 gourdes (42,886,000 in 1941-42). The United States furnished 76.77 per cent of the imports by value in 1942-43 (76.44 in 1941-42) and purchased 80.61 per cent of the exports (79.46 in 1941-42). The British Commonwealth of Nations accounted for most of the remaining trade.

Finance. For the fiscal year 1942-43 total budget receipts were 32,729,087 gourdes (25,599,256 in 1941-42) and total budget expenditures 28,029,972 gourdes (27,726,162 in 1941-42). The surplus of 4,699,105 gourdes in 1942-43 contrasted with a deficit of 2,126,906 gourdes in 1941-42. The public debt outstanding on Aug. 31, 1943, was 70,462,450 gourdes and the net debt was 66,842,189 gourdes.

Transportation. The republic has about 162 miles of railway line, over 1,545 miles of highways, and connections at Port-au-Prince with the Pan American Airways and Royal Dutch Air Lines Caribbean networks. Incoming air passengers for the year ended Sept. 30, 1942, numbered 1,041; outgoing, 1,567. In 1940-41 a total of 442 vessels of 1,253,681 net registered tons called at Haitian ports.

Government. The Constitution of June 17, 1935, as amended Aug. 8, 1939, vested executive powers

in a President elected for five years by a two-thirds vote of the National Assembly. The National Assembly consists of 37 Deputies, elected for four years by the vote of literate property owners, and 21 Senators, 11 elected by the Chamber of Deputies and 11 appointed by the President for six-year terms. Presidents completing their terms since 1930 become life members of the National Assembly. President, Elie Lescot, who replaced Sténio Vincent on Apr. 15, 1941. For Haiti's war declarations, see table under WORLD WAR. For events of 1943, see below.

History. The many-sided program of agricultural diversification undertaken in 1941 and 1942 by the Haitian Government with United States financial and technical aid was further extended in 1943. President Elie Lescot and an official party visited Washington in mid-October for discussions on the joint war effort and economic relations of the two countries. On November 8 the State Department announced the following results of these conversations: (1) an arrangement to expand the Cryptostegia rubber development program in Haiti with the aid of an expenditure of approximately \$9,600,000 by the U.S. Rubber Development Corporation during 1944; (2) an agreement for the repayment by Haiti of the \$5,500,000 public-works credit extended by the United States Export-Import Bank during 1938-42; (3) authorization of a survey by the Inter-American Development Commission of ways in which both private capital and government agencies might cooperate to develop small industries in Haiti, particularly after the war.

It was further agreed that Haiti would take steps to reduce its dollar-bond obligations, and that the Institute of Inter-American Affairs would continue for three more years its public-health and sanitation program in Haiti. Plans were laid for a cooperative educational project involving the exchange of Haitian and United States educators and students, and for the loan of additional United States agricultural, educational, and taxation experts to Haiti.

The Haitian-American Agricultural Development Corporation, known as SHADA, expanded its rubber-growing and other activities during the year. United States newspapermen who inspected the activities of SHADA in October, 1943, reported that the original project for planting 100,000 acres of the rubber-bearing *Cryptostegia* vine had been scaled down to around 75,000 to 80,000 acres, planting of which was expected to be completed by December. A trickle of rubber production had begun. Output for 1944 was variously estimated at 3,000 to 10,000 tons at a cost of 60 cents per pound. Also under cultivation or production by SHADA were over 2,500 acres of sisal, plots of lemon grass and other essential oils, hevia rubber plantations, cocoa plants, lumber, fruits, and spices, and handicraft articles. Employing 75,000 Haitians in October, 1943, it was one of the largest agricultural enterprises in the Western Hemisphere.

On August 11 the U.S. Commodity Credit Corporation contracted to purchase approximately 35,600 short tons of raw sugar from the 1943 Haitian crop and a minimum of 38,000 short tons from the 1944 crop at \$2.65 per 100 lb. f.o.b. Port-au-Prince. Haitian banana production was reduced by August storms which blew down 50 per cent of the plantings in the Plain of Artibonite. Completion of the first health and sanitation projects in Haiti initiated by the Institute of Inter-American Affairs was reported early in the year. These projects included malaria control, water, and sewage works and the construction of sanitary markets.

In recognition of their increasingly close political and economic relations, the U.S. and Haitian Governments in May raised their respective legations to embassies. See **WORLD WAR**.

HAMBURG. See **GERMANY** under *Area and Population*.

HANDBALL. Rubber priorities and traveling conditions again proved severe obstacles to handball in 1943, but the national A.A.U. four-wall championships were held, Joe Platak of Chicago getting enough time off from his duties in the Navy to win the singles title for the eighth time. Platak, unable to defend his honors the previous year, succeeded Jack Clements, Coast star, as champion. The doubles crown was annexed by Joe Gordon and H. Smith of the Pacific Coast Club.

Bill Lauro of the Brooklyn Central Y.M.C.A. became the second man in the history of the sport to win the New York State one-wall and four-wall laurels in one season, Ecky Galowin having turned the trick in 1926.

THOMAS V. HANEY.

HANDICAPPED, Aid to and Employment of. See **CHILDREN'S BUREAU**; **CIVIL SERVICE COMMISSION**; **EDUCATION, U.S. OFFICE of under Vocational Rehabilitation**; **STATE LEGISLATION under Labor**.

HAPSBURGS. See **AUSTRIA**, under *History*.

HARBORS. See **PORTS AND HARBORS**.

HAUPT CASE. See **LAW** under *War Decisions*.

HAVOC (DOUGLAS A-20). See **AERONAUTICS** under *Types*.

HAWAII, Territory of. A Territory of the United States, composed mainly of the eight inhabited islands of the Hawaiian Island group, in the North Pacific Ocean and within the tropics. Capital, Honolulu, on Oahu Island, 2,408 miles from San Francisco.

Area and Population. The islands that form the Territory have a combined area of 6,407 square miles. Their population of Apr. 1, 1940 (U.S. census), numbered 423,330; 1930, 368,336. The estimated population on June 30, 1941, was 465,339, divided as follows: City of Honolulu, 200,158; County of Honolulu (exclusive of Honolulu City), 110,345; City of Hilo, 22,667; County of Hawaii (exclusive of Hilo), 45,731; County of Maui, 52,495; County of Kauai, 33,479; County of Kalawao, 464. There were 387,197 citizens (139,299 Caucasians, 124,351 Japanese, 52,445 part-Hawaiians, 24,886 Chinese, 18,050 Filipinos, 8,460 Puerto Ricans, 4,628 Koreans, and 832 others) as compared with 78,142 non-citizens (35,183 Japanese, 34,010 Filipinos, 4,351 Chinese, 2,328 Caucasians, 2,253 Koreans, and 17 others).

For the fiscal year 1941-42 there were 10,385 births, 3,310 deaths (excluding deaths of military personnel in the course of war operations), and 8,449 marriages. Out of 10,116 live births in the calendar year 1941, 3,347, or 33 per cent, were Japanese; 2,523, or 25 per cent, were part-Hawaiian; 2,222, or 22 per cent, Caucasian; 1,043, or 10 per cent, Filipino; 502, or 5 per cent, Chinese; and 317, or 3 per cent, Hawaiian.

Education. Enrollment in the 188 public schools in June, 1941, numbered 91,121. All except 470 of the pupils enrolled were American citizens. The cost of the public schools in 1940-41 was \$7,199,300 (exclusive of the capital outlay of \$419,726), or an average of \$79.29 per pupil. As of December, 1940, there were 127 private schools, with 833 teachers and 19,836 pupils. Enrollment in the Uni-

versity of Hawaii in 1940-41 was as follows: Undergraduates, 2,030; graduate students, 466; unclassified, 269; noncredit students, 178; summer session students, 1,488.

Production. Sugar and pineapples are the chief products, accounting for about nine-tenths of the normal exports. The output of raw sugar in 1941 was 947,190 short tons, of which 36,618 tons were consumed locally. In 1942 production declined to an estimated 650,000 tons. The pineapple pack for the year ended May 31, 1941, totaled 11,056,491 standard cases of canned fruit and 11,284,938 cases of canned juice. Other products are molasses, canned fish, meat products, cattle hides, bananas, honey, papaya juice, fiber insulating board, and citric acid.

Overseas Trade. Statistics for 1941 and 1942 were withheld for military reasons. For the calendar year 1940 imports from the United States mainland were \$127,439,539; from foreign countries, \$7,999,062. Exports to the United States mainland were \$102,145,130; to foreign countries, \$922,335. For details, see 1943 **YEAR BOOK**.

Finance. Revenue receipts of the Territorial General Fund for the fiscal year ended June 30, 1942, were \$22,065,469 (\$23,631,789 in 1940-41). Working cash in the General Fund on June 30, 1942, after payment of claims for personal services, operating expenses, capital outlays, and fixed charges for the fiscal year, totaled \$4,570,862 (\$4,140,361 on June 30, 1941). Cash on hand and in banks of all funds deemed to be in the Treasury amounted to \$24,529,428 on June 30, 1942 (\$19,606,278 on June 30, 1941). The gross bonded indebtedness outstanding June 30, 1942, was \$34,426,000 (\$36,539,000 on June 30, 1941); net bonded indebtedness, \$23,783,880 (\$25,499,448).

Transportation. Hawaii in 1941 had about 1,038 miles of railway lines including 667 miles of plantation railways; 2,040 miles of highways, with 81,104 automobiles; and inter-island air and steamship services. For the fiscal year ended June 30, 1941, a total of 1,667 vessels of 11,893,803 gross tons entered and cleared the port of Honolulu in the overseas traffic. Incoming ships in 1940-41 carried 2,919,547 tons of cargo and 62,337 passengers; outgoing ships, 1,622,233 tons of cargo and 43,338 passengers.

Government. Governor, Ingram M. Stainback of Honolulu, who replaced Joseph B. Poindexter in 1942. The Governor holds office by appointment of the President of the United States, for a term of four years. The registered voters of the Territory elect quadrennially 15 Senators and biennially 30 Representatives, constituting the Legislature. This body passes appropriations and other acts within the Territorial authority. The popular vote elects to each U.S. Congress a Delegate, with a voice, but no vote, in the House of Representatives. For 1943 developments, see below.

HISTORY

Hawaii at War. During the year 1942 Hawaii was absorbed in the task of repairing the damage caused by the Japanese sneak raid of Dec. 7, 1941. This repair work continued in 1943 but the emphasis began to shift toward strengthening and increasing defenses. The result was that Hawaii became a huge arsenal, supply base, and staging area for operations against Japan. Pearl Harbor is the principal naval base of the United States, and the largest repair base for the Pacific Fleet. The Islands are considered the main defense for our Pacific Coast as well as the springboard for Pacific offensives. Civilian activities kept pace with the

increasing military preparations. Food production and food stocks were increased and business was reported "the best in years." From May, 1942, to June, 1943, Hawaii led all the States in per capita purchase of war bonds. In one month, December, 1942, per capita sales amounted to \$20.16, as compared with \$5.43 for the United States as a whole.

On February 17 the Territorial Legislature convened for its initial war session, without any member of Japanese ancestry for the first time since 1931. Roy Vitousek, Speaker of the House of Representatives, praised the Army's handling of martial law, which had been in effect since Dec. 7, 1941, and promised full cooperation of civil authorities. One of the first proposals to be considered was a bill to prohibit the teaching of Japanese in the schools. The Legislature later requested that Delegate Joseph R. Farrington, Hawaii's representative in the U.S. Congress, introduce a bill in that body granting statehood to Hawaii.

Delegate Farrington and civilian Governor Ingram Stainback also agitated in Washington for the abolishment of martial law. After conferences between the War, Interior, and Justice Departments with the Governor and with Lieut. Gen. Delos C. Emmons, governmental functions were restored on March 10 to civilian authority, with several exceptions. Those functions restored were: price control, rationing, food production and distribution, rent control, health, business licensing, custody of alien property, censorship of civilian mail, liquor control, labor regulation (except on military projects), and all court functions, except in cases of military personnel.

The military retained control of blackout and curfew regulations; the waterfront and other strategic areas remained barred to all except those on military missions. The Army still checked all trans-Pacific travel; the Navy kept cable and radio censorship; the alien population insofar as their activities affected internal security remained under martial law, and their firearms, cameras, and short wave radios were confiscated. Control of labor on war projects was an important item kept under martial law. No strikes were permitted and a worker frozen on his job could be fined for refusing to work. All war workers were investigated and the supply was pooled so as to regulate the huge job of construction and transportation. It was reported that there was no labor unrest on war jobs and that absenteeism was not a serious problem. Suspension of the writ of habeas corpus still remained in effect.

Military rule was kept in the hands of General Emmons, Commanding General of the Hawaiian Department and military Governor of Hawaii. General Emmons was succeeded by Lieut. Gen. Robert C. Richardson, Jr., on June 1. In September, General Richardson's scope of authority was increased by President Roosevelt to include the entire Central Pacific area, with the new title of Commanding General of Army Forces in the Central Pacific. This order came immediately after the Quebec Conference and was taken to indicate the change in Hawaii's role from one of defense to one of offense. Toward the end of the year, the blackout restrictions of military rule were somewhat eased. Lights with a new type of shield were permitted on the streets, and unrestricted lighting was permitted in homes and business establishments until 10 p.m. This relaxing was announced by General Richardson with the warning that the islands were still subject to an enemy raid. He also announced the lifting of curfew restrictions

for Koreans, thus indicating that they were no longer to be classed as enemy aliens.

Habeas Corpus Controversy. The imposition of martial law in Hawaii on Dec. 7, 1941, carried with it the suspension of the right to bring habeas corpus proceedings. This gave military authorities the right to intern any suspect, after hearings. On Aug. 3, 1943, Joseph E. Thornton, Chief of the Hawaii F.B.I., announced that 1,479 persons had been interned in Hawaii since the Pearl Harbor attack. Of these only one case, that of Otto Kuehn, had received any publicity concerning legal action taken. On August 15, U.S. District Judge Delbert Metzger ruled the suspension of habeas corpus invalid and issued writs that two German-Americans interned by the Army be produced. Judge Metzger based his ruling on the partial relaxation of martial law which had been proclaimed the previous March.

At that time Governor Stainback had declared that jurisdiction was restored to the civil authorities "except for certain specified subjects which are primarily of military concern." One of the exceptions made was the continued suspension of habeas corpus. Judge Metzger maintained, however, that if jurisdiction was restored to the civil court in part, it must be restored in full. He, therefore, directed that the writs be served upon General Richardson. Several efforts to serve the papers were blocked by the military police. Judge Metzger countered with a citation for contempt of court to be served upon General Richardson. U.S. Attorney Angus Taylor attempted to offer a statement for General Richardson, but was not allowed to make it. He then stated that he had been told by General Richardson to inform the court that the two internees would not be produced in court. General Richardson was then judged to be in contempt of court and a fine of \$5,000 was fixed. He retaliated with an order forbidding any further action in the proceedings, and further ordered that any other habeas corpus proceedings should be immediately dismissed.

On August 26, a statement issued from the War Department in Washington upheld General Richardson and explained that Judge Metzger had "erroneously construed" the relaxation of martial law. The judge was prohibited from enforcing the fine and was even faced with the prospect of a fine himself if he continued the proceedings. Legal precedent for suspension of the writ of habeas corpus was found in a law of Mar. 3, 1853, by which Congress authorized President Lincoln to suspend the writ. Within a few days, however, the issue became less clear-cut. After the public support of General Richardson by the War Department, it was reported that the feeling in Washington was that this example of military rule should be tempered.

The War, Interior, and Justice Departments agreed, after a conference with Hawaiian officials, that the issue was constitutional and was to be decided by the civil courts. General Richardson accepted service of the writs of habeas corpus and rescinded his order forbidding the courts to carry on proceedings of habeas corpus. The writs in question were dismissed by the Federal Court and the two German-American internees were taken to the United States and freed. But suspension of the writ of habeas corpus remained effective in Hawaii, with the constitutionality of such suspension still untested.

Selective Service. The working of the draft law in the Territory was considered unsatisfactory by Hawaii's Selective Service Director. He announced

in June that the half of the population with an Oriental heritage was shirking its share of the draft load. He criticized the many requests for deferment. Some were from "non-essential white collar workers, truck drivers, clerks, and even soda fountain attendants." The Director admitted the existence of a manpower shortage, but declared it was partly due to the 40-hour work week. However, enlistments from among American-born Japanese, or *Nisei*, were encouraging, after announcement by the Army that its ranks would be open to such volunteers.

Under a policy defined by Secretary Stimson, these volunteers were to be trained in special combat units comprising infantry, artillery, engineer, and medical personnel. Hawaii was directed to enlist 1,500 citizens of Japanese ancestry. Within two months after the announcement, 4,100 Hawaii-born Japanese volunteers were in training either in Hawaii or on the mainland. The increase in number above the original quota came as a result of the small response from mainland Americans of Japanese origin. A contingent of 2,600 left Hawaii at one time for the mainland and were given a typical "chamber of commerce aloha" before the largest crowd in Honolulu's history.

Civilian Defense. Governor Stainback reported bomb shelters scattered throughout the Islands; emergency hospitals and first-aid stations constructed and staffed by volunteer nurses; the civilian population vaccinated, fingerprinted, and furnished with gas masks. The water supply had been treated against contamination and all utilities were constantly guarded. However, the huge increase in the number of workers with the accompanying overcrowding created special problems of sanitation and health. Tuberculosis was reported on the increase, but a constant guard was maintained against outbreak of tropical diseases. Small epidemics of infantile paralysis and dengue fever were reported to be under control.

See *LAW under War Decisions*.

CHARLES F. REID.

HAY. The hay crop in 1943 was estimated by the U.S. Department of Agriculture at 99,543,000 tons which included 87,264,000 tons of tame hay and 12,279,000 of wild hay, only 5 per cent less than the 105,295,000 tons harvested in the 1942 record crop and compared with the 1932-41 average of 82,952,000 tons. The acreage harvested in 1943, 74,417,000 acres, compared with 72,649,000 acres in 1942 and the average of 68,754,000 acres for the 10-year period. The average yield per acre was 1.34 tons in 1943 and 1.45 tons in 1942.

Important kinds of tame hay, with production totals, included alfalfa, 32,465,000 tons from 14,983,000 acres; clover and timothy 29,238,000 tons from 20,621,000 acres; lespedeza 5,944,000 tons from 6,114,000 acres; soybeans 4,093,000 tons from 3,442,000 acres; sweet clover 573,000 tons from 458,000 acres; cowpeas 1,011,000 tons from 1,372,000 acres; peanuts 1,989,000 tons from 4,008,000 acres; small grains cut green for hay 3,892,000 tons from 3,011,000 acres; sweet sorghum (sorgo) for forage and hay 10,993,000 tons from 8,414,000 acres; and other hay crops 8,059,000 tons from 7,007,000 acres.

Production of seed of important kinds of hay included alfalfa seed 1,114,900 bu., red clover 1,142,900, alsike clover 238,900, sweet clover 457,900, timothy 1,499,600, and lespedeza 159,920,000 pounds. The total production of the six principal hay crop seeds was 3 per cent smaller than in 1942 but 6 per cent larger than the 10-year

State	Value	Acres Harvested	Production (tons)
Calif.....	\$102,803,000	1,989,000	5,628,000
Wis.....	80,298,000	3,981,000	7,164,000
N.Y.....	79,030,000	4,000,000	6,234,000
Iowa.....	66,639,000	3,154,000	5,152,000
Ill.....	61,459,000	2,630,000	3,347,000
Minn.....	58,997,000	4,278,000	6,929,000
Ohio.....	58,894,000	2,435,000	3,510,000
Penn.....	58,397,000	2,260,000	3,419,000
Mich.....	56,720,000	2,709,000	3,838,000
Mo.....	56,442,000	3,292,000	3,775,000
Tenn.....	54,882,000	2,148,000	2,249,000
Ind.....	48,322,000	2,065,000	2,172,000
Ky.....	45,402,000	1,801,000	2,172,000
Neb.....	40,540,000	3,929,000	3,669,000
Wash.....	39,943,000	2,036,000	2,048,000
Colo.....	34,612,000	1,421,000	2,197,000
Idaho.....	34,320,000	1,150,000	2,324,000
Ore.....	32,826,000	1,100,000	1,907,000
Mont.....	32,244,000	1,957,000	2,499,000
N.C.....	31,526,000	1,373,000	1,283,000
Va.....	31,356,000	1,387,000	1,427,000
Kan.....	30,746,000	1,571,000	2,440,000
Texas.....	29,604,000	1,936,000	1,673,000
Okla.....	26,038,000	1,661,000	1,657,000
Ark.....	25,906,000	1,345,000	1,161,000
Miss.....	22,330,000	995,000	1,007,000
Utah.....	21,729,000	568,000	1,158,000
Ala.....	21,392,000	1,365,000	901,000
W.Va.....	19,068,000	810,000	984,000
S.D.....	18,010,000	3,045,000	2,657,000
Ga.....	16,420,000	1,691,000	897,000
Vt.....	15,771,000	871,000	1,197,000
N.D.....	15,623,000	2,741,000	3,103,000
Ariz.....	14,905,000	282,000	721,000
Wyo.....	14,707,000	950,000	1,110,000
Md.....	12,614,000	444,000	547,000
S.C.....	11,895,000	716,000	479,000
Mass.....	11,739,000	355,000	568,000
Maine.....	11,190,000	863,000	863,000
N.J.....	10,496,000	260,000	412,000
Nev.....	9,634,000	407,000	580,000
N.M.....	9,060,000	210,000	436,000
Conn.....	9,037,000	286,000	415,000
N.H.....	6,628,000	341,000	416,000
La.....	6,617,000	350,000	397,000

average. The seasonal average price per ton received by farmers for all hay was \$15.91 (December 1 price) and the estimated value of production was \$1,388,232,000 in 1943 compared to \$10.63 and 980,617,000 in 1942. The accompanying table lists the main States in the production of hay for 1943.

HEALTH WORK. See BIRTH CONTROL; CHILDREN'S BUREAU; COMMONWEALTH FUND; COORDINATOR OF INTER-AMERICAN AFFAIRS; FEDERAL SECURITY AGENCY; LABOR CONDITIONS under *Women Workers*; MEDICINE AND SURGERY; MINES, BUREAU OF; PHILANTHROPY; PUBLIC HEALTH SERVICE; RED CROSS; RELIEF AND REHABILITATION; ROCKEFELLER FOUNDATION; SANITATION; also BRAZIL, ECUADOR, and GUATEMALA under *History*.

HEATING AND VENTILATING. Other than developments in the associated function of air conditioning (see REFRIGERATION AND AIR CONDITIONING) in which heating is tied up, the outstanding news during 1943 was that in connection with the fuel situation, which changed sharply during the year. The winter of 1942-43 was one in which there was considerable concern over the scarcity of fuel oil; on the whole this situation was well handled, so that by the close of the 1942-43 heating season the fuel oil problem was not so acute. With the threat of a coal strike actually becoming a reality on a small scale in February and in full scale on May 1 considerable concern began to be felt regarding the availability of coal for the 1943-44 heating season. As the summer of 1943 progressed a serious coal shortage appeared inevitable, and by the close of the year the shortage had actually become a famine in some sections, notably New England and the Middle Atlantic States. (See *COAL*.) In

December when a severe cold wave hit the country thousands of homes and apartments were short of fuel; the area in and around New York City was especially hard hit. In the meantime fuel oil, while not overly plentiful, was coming through in sufficient quantities, and this was loudly commented on by those building owners who had at more or less expense converted from oil to coal. Even while coal was becoming increasingly scarce these conversions had continued, as at Parkchester, the very large apartment house development in the Bronx, N.Y., the conversion of whose power plant was a several hundred thousand dollar undertaking which could hardly be stopped once it had gotten under way, although a number of in-process conversions was finally halted. The Solid Fuels Administration announced in the fall that it would not coupon-ration coal unless forced to. Steps were taken, though, to prevent dealers from delivering coal to places where more than a few days' supply was already in the bins.

The severe metal restrictions during 1943 forced, through pressure by WPB, redesign of many heating plants for war plants. A number of these were redesigned to utilize direct-fired warm air rather than steam or hot water systems. Ductwork for the carrying of heated or ventilation air was to a large extent made of substitutes for sheet metal, such as asbestos cement, various boards, and even plastics; metal piping, however, was not displaced in any important quantities in heating plants by plastic pipe. Wooden grilles replaced many metal air outlets.

Radiant heating continued to occupy the interest of engineers. Several large airplane hangars near Denver were heated by this method, and it was found to give surprisingly good heat distribution considering the height of these structures; a naval chapel was radiant-heated in Florida, as were several residences.

Research work in heating was retarded during the year. Most laboratories, such as those at universities, were active on military problems. The American Society of Heating and Ventilating Engineers was operating its research laboratory on a limited basis, but appointed a director of research who began to lay careful plans for postwar research. A comprehensive program of investigation of various phases of heating with bituminous coal was undertaken by the Bituminous Coal Research, Inc., an organization of soft-coal mine operators. The work will be done at Battelle Memorial Institute, Columbus, Ohio.

As compared with well-integrated industries, those firms engaged in heating have always been handicapped by lack of a unified organization comprising all phases of heating. To remedy this, an organization called the Indoor Climate Institute was formed during 1943 to bring together the scattered elements concerned with heating. It included manufacturers, coal, gas, and oil interests, installers, dealers, and contractors, consulting engineers and architects, and others. A broad campaign with the objective of selling the building owner on proper indoor air conditions was inaugurated.

Sheet metal contractors, who install ventilating systems and warm-air heating systems, and who have been without a national organization for some years, formed the Sheet Metal Contractors National Association during 1943.

The Quartermaster Corps announced that a simple oil-burning unit had been developed to convert the standard Army tent-heating stove into a smokeless oil burner. The device will give as much heat as the coal unit, but the smokeless feature

will be advantageous in any theater of operations where smoke would disclose the presence of troops.

The high speeds at which machine tools are run today, made possible by high-speed cutting alloys and rugged machines, coupled with the operation of the machines over the full 24-hour day, has made machine-shop mist a severe problem in some plants. The mist is the vapor from the cooling oil supplied to the cutting edge which, being hot, evaporates the oil and forms the mist. To overcome this, a number of installations of electric air filters were made in connection with ventilating systems; the filter electrostatically charges the particles forming the mist; these particles are attracted to an oppositely charged plate, and from there collected; the cleaned air is then recirculated to the shop. See ELECTRICAL INDUSTRIES.

CLIFFORD STROCK.

HEINKEL. See AERONAUTICS under *Axis Types*.

HELICAT, HELDIVER. See AERONAUTICS under *Types*.

HELICOPTERS. See AERONAUTICS.

HELIUM. See MINES, BUREAU OF.

HEMISPHERE SOLIDARITY. See COORDINATOR OF INTER-AMERICAN AFFAIRS; PAN AMERICANISM; PAN AMERICAN UNION.

HEMP. See NARCOTICS DRUG CONTROL.

HENSCHEL. See AERONAUTICS under *Axis Types*.

HESSE. See GERMANY under *Area and Population*.

HESSIAN FLY. See INSECT PESTS.

HIDES, LEATHER, AND SHOES. Mounting military and lend-lease requirements for leather and leather products, particularly shoes, clashed with a marked drop in available supplies, so that hides and leather were pushed into the category of the most critical materials in 1943. The most striking result of this trend was the need of a further tightening in the shoe rationing for the civilian population, which now is based on only two pairs of shoes annually for each person.

Shoe production for military needs jumped from 15 million pairs in 1941 to nearly 41 million pairs in 1942, and increased further to approximately 45 million pairs in 1943. At the same time civilian shoe production which had established a peak of 483 million pairs in 1941 dropped off to 443 million pairs in 1942, and was further reduced to 413 million pairs in 1943.

Hides. Total movement into sight of cattle hides in 1943, indicating the amount of hides available for processing into leather, dropped sharply from 25,508,000 hides in 1942 to 22,300,000 hides in 1943. Wettings of cattle hides, that is the actual amount of hides put into process for all types of leather, dropped from 28,232,000 hides in 1942 to 21,800,000 in 1943. This figure includes both domestic and foreign cattle hides. The decline in new supplies became more pronounced as the year progressed and was marked both in domestic and foreign supplies.

The difficult domestic supply situation was further complicated by the fact that the normal marketing of hides was seriously disturbed as the result of a sharp increase in livestock and meat black market operations which caused a decided shift from Federally inspected to uninspected slaughter with resultant lowering in the quality of hides, and which also caused the destruction of a substantial number of hides in an attempt to conceal illegal slaughtering operations.

The decline in hide imports also became more pronounced as the year progressed. Total imports for 1943 are estimated at only 4,700,000 hides as compared with 6,600,000 hides in 1942. The fol-

lowing table shows the development of total hides supplies during the past decade:

	Total Hide Wetlings	Foreign Hides Included
1934.....	17 million	1 million
1935.....	19 "	1½ "
1936.....	20 "	1½ "
1937.....	19 "	1½ "
1938.....	17 "	.7 "
1939.....	19 "	1.7 "
1940.....	19 "	2½ "
1941.....	25½ "	5.9 "
1942.....	28 "	6.6 "
1943.....	22 "	4.7 ^a "

^a Estimated.

The sharp decline in hide imports was due largely to an agreement between the United States and Great Britain regarding the division of South American exportable hide supplies. The Combined Raw Materials Board, after an intensive study of the leather industry in Great Britain and the South American hide markets finally recommended centralization of all buying of foreign hides in the hands of the government. This was done to facilitate the allocation of foreign hide supplies between Great Britain and the United States. Under this allocation system, total domestic supplies in the United States and in Great Britain, as well as the available export surplus in foreign countries are added together and then divided between the United States and Great Britain according to a population ratio of three and a half to one. This provides a flexible quota system for hide shipments from South America which at the moment means distribution of these supplies at a ratio of about 50 to 50 between the two major hide buying nations. This arrangement represented an important improvement over the original recommendation of the Combined Raw Materials Board to divide South American hide supplies between the two countries in a ratio of 70 to 30 in favor of Great Britain, despite the fact that historically the United States always had bought the major part of the South American hide surplus. To carry out the new hide purchasing program, a "Joint Hide Buying Office" was created in Washington in which Great Britain and the United States have equal participation, and Canada sits in whenever her interests are concerned.

Leather. Leather production in 1943 took a sharp drop in all categories except sheep and lamb, as shown in the following production figures:

PRODUCTION OF LEATHER
(In equivalent of hides)

	1943 ^b	1942
Cattle.....	25,400,000	30,828,000
Calf and kip.....	11,200,000	12,264,000
Goat and Kid.....	37,800,000	41,127,000
Sheep and lamb.....	59,500,000	53,629,000

^b Partly estimated.

As far as cattle hide leather is concerned, consumption dropped less than production so that total visible stocks in all hands at the end of 1943 declined to a level of 10,100,000 hides, as compared with 12,225,000 at the end of 1942. This inventory level is generally regarded as the irreducible minimum, and the industry feels very strongly that from this point on, consumption and production must be kept in balance so that no further shrinkage in inventory occurs. This is particularly true because no improvement can be expected in hide imports in 1944, while on the other hand leather demand for lend-lease purposes will be sustained at its current high level. Although shoe and leather demand is expected to be very acute in the liberated areas in

Europe, it is not now contemplated that shoes manufactured from leather will figure high in our relief activities. The emphasis will be entirely on canvas shoes, as it is believed that satisfactory types of shoes have been developed in this general category.

Shoes. The following table shows the trend in shoe production during the past few years according to major types of shoes:

PRODUCTION OF SHOES
[000 pairs]

	1941	1942	1943 ^a
Civilian.....	483,097	442,995	413,352
Military.....	15,285	40,875	44,733
Total.....	498,382	483,870	458,085
Breakdown of civilian production:			
Women's.....	184,915	181,685	150,000
Men's ^b	120,519	102,100	83,200
Misses & Children's...	47,912	41,284	32,300
Boys & Youths.....	19,159	17,106	19,500
Infants.....	28,175	25,657	25,000
All other.....	82,417	75,160	104,000

^a Partly estimated. ^b Except military.

Controls over the use of leather were sharply tightened in 1943 by the War Production Board in order to safeguard military needs. They are now codified in Conservation Order M-310. Distribution is directed by a special "Requirements Committee" in the Textile, Clothing & Leather Division of WPB.

H. LUEDICKE.

HIGH SCHOOL VICTORY CORPS. See EDUCATION, U.S. OFFICE OF.

HIGHWAYS. See ROADS AND STREETS.

HISTORY. For books on history published during the year see the articles on literature. For events, see the sections on *History* under each country. See EDUCATION; LAW under *Legal Education* for teaching of history; PHILOSOPHY.

HOCKEY. Gloomy Gus and his followers were ready to "bury" hockey for the duration when the 1941-42 season closed, but the sport survived and the National League enjoyed a boom during its 1942-43 campaign, with 1,446,747 paid admissions, an increase of 17,544 per club over the previous winter's average.

The high-flying Red Wings of Detroit carried off the title in the regular league season, then won the Stanley Cup, hockey's richest prize. Detroit's home attendance soared well over 250,000, an all-time club record.

In play-offs leading to the cup finals, Detroit beat Toronto, 4 games to 2, and Boston eliminated the Canadians, 4 to 1. Then, with Goalie Johnny Mowers starring, the Red Wings swept over Boston in four straight contests for world laurels, winning by 6-2, 4-3, 4-0 and 2-0. Individual scoring honors in the league were annexed by Doug Bentley of the Chicago Black Hawks, who tallied 73 points to tie Cooney Weiland's record.

The Coast Guard Cutters of Curtis Bay, Md., carried off the Eastern League title, Buffalo dethroned Indianapolis as American League ruler, and Dartmouth won the Pentagonal League championship.

In Canada, the Allan Cup, emblematic of the Senior Amateur championship, was won by the Ottawa Commandos.

THOMAS V. HANEY.

HOGS. See LIVESTOCK.

HOLC. Home Owners' Loan Corporation. See NATIONAL HOUSING AGENCY.

HOLD-THE-LINE ORDER. See AGRICULTURE under *Wartime Price Control*; BUSINESS REVIEW; FOOD

INDUSTRY; LABOR CONDITIONS under *Wages*; NATIONAL WAR LABOR BOARD; PRICE ADMINISTRATION; UNITED STATES under *Inflation*; WAR MANPOWER COMMISSION.

HOME ECONOMICS, Bureau of. See AGRICULTURE, U.S. DEPARTMENT OF.

HOME OWNERS' LOAN CORPORATION (HOLC). See NATIONAL HOUSING AGENCY.

HOMES USE SERVICE. See NATIONAL HOUSING AGENCY.

HONDURAS. A Central American republic. Capital, Tegucigalpa.

Area and Population. Area, 46,332 square miles. Population, estimated at 1,038,061 on June 30, 1940 (854,154 in 1930). The people are mainly of mixed Spanish and Indian blood, except for a considerable Negro element in the north coast banana region and some 35,000 aborigines. Population of Tegucigalpa (including the town of Comayagüela), 47,223 in 1940; of other cities in 1935: San Pedro Sula, 32,721; Tela, 14,460.

Defense. Every male citizen is liable to compulsory military service. As of Jan. 1, 1941, the army comprised 2,347 active soldiers and 15,000 trained reserves. Defense expenditures in 1942-43, 2,416,000 lempiras.

Education and Religion. According to the 1935 census, about 67 per cent of the inhabitants over seven years old were illiterate. Of some 113,840 children of school age, 52,612 were receiving instruction from 1,620 teachers in 1940-41. Secondary, normal, and commercial schools had 2,474 students and the National University at Tegucigalpa 357. Roman Catholicism is the prevailing religious faith.

Production. The main occupations are agriculture, stock raising, and mining. The banana industry, the chief source of wealth, was badly hit by the sigatoka or leaf-spot disease, which caused exports to decline from 29,083,665 stems in 1929-30 to 8,458,803 in 1937-38. The disease was being brought under control when the shipping crisis of 1942 resulted in a 50-per-cent decline in banana exports from the 13,436,935 stems shipped in 1940-41. Coffee (45,000 bags produced in 1942), tobacco, henequen, coconuts, corn, beans, sugar, and fruit are other agricultural products. The United Fruit Co. began the large scale cultivation of abaca and rubber in 1942 (see 1943 YEAR BOOK, p. 306). Gold and silver normally account for about 20 per cent of the total value of exports, but production fell sharply in 1942. Antimony is also mined. There is some manufacturing for home production and cigars and matches are exported.

Foreign Trade. For the fiscal year ended June 30, 1941, imports were \$10,254,735 and exports \$10,118,432 (\$10,085,069 and \$9,657,294 respectively in 1939-40). Figures are in U.S. dollars converted from lempiras at two lempiras to the dollar. Leading 1940-41 exports were bananas, \$6,701,839; silver, \$1,312,377; gold, \$966,077; scrap ores, \$440,045. The United States supplied 76.1 per cent of the 1940-41 imports and took 96.3 per cent of the exports. In 1941-42 imports increased 9 per cent and exports declined 7 per cent from the 1940-41 levels.

Finance. Actual budget revenues in 1941-42 totaled 11,205,000 lempiras; expenditures, 11,647,000. Budget estimates for 1942-43 balanced at 12,222,000 lempiras. The public debt totaled 17,137,000 lempiras on July 31, 1942. The official exchange rate of the lempira remained at 2.04 lempiras to the dollar in 1941 and 1942.

Transportation. There are three railways with some 920 miles of line on the north coastal region, without international connections. Of 763 miles of highway in 1941, 357 miles were macadam. With financial aid from the United States (see 1943 YEAR BOOK, p. 306), the Honduran section of the pioneer Pan American Highway was opened to traffic in 1943 and work carried forward on the Potrerillos-Tegucigalpa highway. The TACA airways link Tegucigalpa with the chief centers of Honduras and neighboring territories, and the Pan American Airways route to Panama passes through Honduras. During 1940-41 a total of 1,350 ships of 1,652,949 tons entered the ports, with 174,847 metric tons of cargo and 5,871 passengers.

Government. President in 1943, Gen. Tiburcio Carias Andino (Nationalist), who was elected Oct. 30, 1932, for a four-year term. By constitutional amendment, his term was extended in 1936 for a further six years and in December, 1939, until January, 1949. The Constitution of Apr. 15, 1936, extended the terms of the President, Vice-President, and members of Congress from four to six years; it stipulated that the Constituent Assembly of 59 members (all Nationalists) should automatically become the regular National Congress with the members holding office until Dec. 4, 1942. The new Congress elected Oct. 11, 1942, was composed exclusively of Nationalists. The Honduran Government declared war on Japan December 8 and on Germany and Italy Dec. 12, 1941. For 1943 developments, see below.

History. The top-heavy economy of Honduras, largely dependent upon exports of bananas and of newly mined gold and silver, was badly shaken in 1942 and 1943 as a result of the war emergency which greatly curtailed the foreign demand for these products. The restriction of trade brought a decline in customs revenues, shortages of essential imports, rising prices, and unemployment.

Financial and technical assistance provided by the U.S. Government helped to mitigate the severity of the resulting economic dislocation. In 1942 Honduras received an Import-Export Bank loan for highway construction and sanitation projects as well as contracts from United States war agencies for the production of rubber, abaca, henequen, and other strategic materials (see 1943 YEAR BOOK). United States highway engineers and public health experts were sent to Honduras to assist local authorities in carrying out new public works projects.

This form of assistance was further extended during 1943. The Institute of Inter-American Affairs, an agency of the Office of the Coordinator of Inter-American Affairs in Washington, announced the conclusion on March 13 of an agreement for United States-Honduran collaboration in a food production program in Honduras and in a road-building project for unemployed banana workers. Funds supplied from Washington made possible the development of a number of Honduran projects for the growing of vegetables and fruits, and for the expansion of livestock production. The cooperative agreement for plantation rubber investigations in Honduras, signed Feb. 28, 1941, was extended indefinitely upon its expiration June 30, 1943. Under the United States purchase program, Honduran rubber exports increased to 30,334 pounds in October, 1943.

In mid-February the Honduran Government requested the dispatch of United States banking and economic experts to make a study of Honduran finances and economic needs and to advise it on the establishment of a national bank. This mission

was reported at work in Honduras in June. In recognition of the growing political and economic ties between the two countries, the U.S. and Honduran Governments in May raised their respective legations to the rank of embassies.

The Government on November 23 announced that it had uncovered a plot to assassinate President Carias Andino and kidnap his wife and daughter. Among those arrested in connection with the plot were some members of the Presidential guard. The dictatorship established censorship over the press and mail for the purpose of "maintaining internal peace and preventing attacks on friendly and Allied governments and peoples," according to an announcement of June 11. See WORLD WAR.

HONDURAS, British. See BRITISH HONDURAS.

HONG KONG. A British crown colony under control of the Japanese since the surrender of the garrison on Dec. 25, 1941. Total area, 391 square miles, comprising the island of Hong Kong (32 sq. mi.), Old Kowloon (3 sq. mi.), and the New Territories leased from China (June 8, 1898), for 99 years (391 sq. mi.). Total civil population (1941 estimate, excluding 750,000 refugees from China), 1,050,256, of whom 1,026,645 were Chinese and 23,611 non-Chinese. Capital, Victoria. Vital statistics (1939): 46,675 births and 48,283 deaths. Education (Mar. 31, 1941): 1,273 schools and 116,280 students enrolled.

Production and Trade. The chief agricultural crops consisted of rice, sweet potatoes, groundnuts, sugar cane, and fruits. Shipbuilding, fishing, the manufacture of tobacco goods, cement, knit and woven goods, rubber shoes, flashlight torches, and tin refining were the main industries. Trade (1940): imports HK\$752,880,000; exports HK\$662,320,000 (HK\$ averaged \$0.2298 for 1940). Shipping (1940): 28,943 vessels aggregating 21,908,350 tons entered and cleared. Roads (1940): 384 miles.

Government. Finance (15 months ended Mar. 31, 1941): revenue HK\$70,175,115 and expenditure HK\$64,787,557; public debt HK\$27,268,000. Under British rule the colony was administered by a governor, assisted by an executive council. There was a legislative council of 18 members, including the Governor as president. Japanese Governor, Lt. Gen. Rensukä Isogai. See CHINA under *History*.

HORSES AND MULES. See LIVESTOCK; RACING; countries under *Production*.

HORTICULTURE. Fruit production for the season of 1943 (including citrus fruits for the harvesting season of 1943-44) was the smallest since 1938, or about 12 per cent lower than the record-high production of 1942. Yield per acre was indicated as being 11 per cent below 1942, but a fourth larger than the 1923-32 average. The 1943 season was disappointingly featured by extremely small crops of apples, peaches, pears, cherries, apricots, and strawberries. Winter and spring injury by freezes and unfavorable weather during pollination were largely responsible for the light crop of tree fruits. The smallest strawberry crop since 1920 resulted from a strong reduction in acreage and light yields per acre. However, to partially offset these small crops, the season showed the largest crop of grapes on record, large crops of plums, prunes, and figs, and a likely new high in tonnage for citrus fruits. The estimated production of oranges for the 1943-44 season indicates the largest on record, the grapefruit outlook is for a crop second only to the record crop of 1943, and

lemon production probably will be the third largest yield on record. The accompanying table was compiled from data released by the U.S. Department of Agriculture.

Crop	Unit	1943	1942	1932-41 av.
Apples.....	Bu.	88,086,000	128,273,000	121,641,000
Peaches.....	"	42,060,000	66,365,000	55,392,000
Pears.....	"	24,511,000	30,717,000	27,938,000
Grapes.....	Tons	2,790,000	2,402,000	2,354,000
Cherries.....	"	122,000	196,000	150,000
Prunes (dried)	"	206,000	177,000	215,000
Oranges.....	Boxes	96,290,000	89,316,000	66,764,000
Grapefruit...	"	49,187,000	50,481,000	29,310,000
Lemons.....	"	14,274,000	14,940,000	10,146,000
Cranberries...	Bbl.	686,000	800,000	610,000
Pecans.....	Lb.	114,749,000	77,200,000	91,113,000

Combined production of important commercial truck crops in 1943, for the fresh market and for processing, was approximately 10 per cent less than for 1942, but was greater than for any previous year excluding 1941. Both fresh market and processing crops showed deep reductions from 1942. The reduction, however, was partially made up by increased vegetable production in Victory gardens (see AGRICULTURE). The downward trend in acreage for the fresh market, which started in 1940, continued in 1943, and the harvested acreage was the smallest since 1933. Yield per acre, on the other hand, was near the 1942 level and above that of any other year since 1929. The acreage for processing in 1943 was about 3 per cent below that for 1942, but 49 per cent above average. The aggregate yield per acre was down about 11 per cent, due mainly to drought in important areas of production. Production was less in 1943 than in 1942 for all processing crops except snap beans and beets. Combined acreage, for marketing fresh and for processing, was 5 per cent below 1942, but greater than any other year. The estimate of yields of commercial truck crops in the United States, as published by the U.S. Department of Agriculture, is shown in the accompanying table.

Crop	Unit	1943	1942	1932-41 av.
Asparagus....	Crates	9,770,000	9,213,000	6,845,000
Beans (snap)...	Bu.	17,057,000	15,980,000	14,597,000
Beets.....	"	2,203,000	2,128,000	2,095,000
Cabbage.....	Tons	1,031,200	1,276,500	1,032,300
Cauliflower....	Crates	7,569,000	9,481,000	8,253,000
Cantaloupes...	"	8,667,000	9,610,000	11,566,000
Celery.....	"	15,938,000	17,335,000	15,143,000
Lettuce.....	"	23,977,000	23,412,000	20,353,000
Onions.....	Sacks	14,816,000	18,781,000	15,402,000
Peas.....	Bu.	6,058,000	6,214,000	8,422,000
Spinach.....	"	14,531,000	14,815,000	14,233,000
Strawberries...	Crates	7,161,000	13,401,000	11,293,000
Tomatoes.....	Bu.	26,101,000	26,618,000	22,677,000
Watermelons...	Melons	47,948,000	56,526,000	66,113,000

Total value of sales of commercial truck crops in 1943 was \$717,124,000, as compared with \$514,617,000 in 1942 and \$255,547,000 for the 1932-41 average, according to the U.S. Department of Agriculture. See INSECT PESTS.

HOSIERY. See TEXTILES.

HOSPITALIZATION, Federal Board of. An advisory Board of the U.S. Government, organized in 1921 to coordinate the hospitalization activities of the medical branches of the Army and Navy, the U.S. Public Health Service, the U.S. Veterans' Administration, St. Elizabeths Hospital, and the Commissioner of Indian Affairs. On May 7, 1943, it was also designated as an advisory agency to the Bureau of the Budget. It has been charged with the development of a complete over-all program for providing hospitalization for the veterans of World War II. Chairman in 1943: Brig. Gen. Frank T. Hines.

HOSTAGES. See **BELGIUM**, and the other German-occupied countries, under *History*.

HOT SPRINGS CONFERENCE. See **UNITED NATIONS**.

HOURS OF WORK. See **LABOR CONDITIONS** under *Hours of Work* and the topics there listed.

HOUSE OF REPRESENTATIVES. The members of the House of Representatives at the second session of the 78th Congress meeting Jan. 10, 1944, are shown in the accompanying list. Political affiliation may be determined by the following, with the number of members in parenthesis: Democrats in roman (219); Republicans in *italics* (207); Progressives in SMALL CAPS (2); Farmer-Labor in CAPS (1); American Labor in *italic* SMALL CAPS (1); vacancies (5); total, 435. Subsequent to this listing two special elections were held in Pennsylvania, involving the Second district where Republican Joseph M. Pratt was elected to replace Democrat William A. Barrett, who resigned; and the Seventeenth district where Republican Samuel K. McConnell replaced J. William Ditter (see **NECROLOGY**), who died in an airplane crash. Representative Joseph Gavagan, Democrat, of New York resigned on January 11. Representative Lawrence Lewis, Democrat from Colorado, died Dec. 9, 1943; William H. Wheat, Republican from Illinois, died Jan. 16, 1944.

Name	Dist.	State	City
Abernethy, Thomas G....	4	Miss.....	Okolona
Allen, A. Leonard.....	8	La.....	Winnfield
Allen, Leo E.....	13	Ill.....	Galena
Andersen, H. Carl.....	7	Minn.....	Tyler
Anderson, Clinton P.....	At L.	N.M.....	Albuquerque
Anderson, John Z.....	8	Calif.....	San Juan Bautista
Andresen, August H.....	1	Minn.....	Red Wing
Andrews, Walter G.....	40	N.Y.....	Buffalo
Angell, Homer D.....	3	Ore.....	Portland
Arends, Leslie C.....	17	Ill.....	Melvin
Arnold, Wat.....	1	Mo.....	Kirksville
Auchincloss, James C....	3	N.J.....	Rumson
Baldwin, H. Streett.....	2	Md.....	Towson
Baldwin, Joseph Clark....	17	N.Y.....	New York City
Barden, Graham A.....	3	N.C.....	New Bern
Barrett, Frank A.....	At L.	Wyo.....	Lusk
Barry, William B.....	2	N.Y.....	St. Albans
Bates, George J.....	6	Mass.....	Salem
Bates, Joe B.....	6	Ky.....	Greenup
Beall, J. Glenn.....	6	Md.....	Frostburg
Beckworth, Lindley.....	3	Tex.....	Gilmer
Bell, C. Jasper.....	4	Mo.....	Blue Springs
Bender, George H.....	At L.	Ohio.....	Cleveland Heights
Bennett, John B.....	12	Mich.....	Ontonagon
Bennett, Marion T.....	6	Mo.....	Springfield
Bishop, C. W. (Runt)....	25	Ill.....	Carterville
Blackney, William W.....	6	Mich.....	Flint
Bland, Schuyler Otis....	1	Va.....	Newport News
Bloom, Sol.....	19	N.Y.....	New York City
Bolton, Frances P.....	22	Ohio.....	Lyndhurst
Bonner, Herbert C.....	1	N.C.....	Washington
Boren, Lyle H.....	4	Okla.....	Seminole
Boykin, Frank W.....	1	Ala.....	Mobile
Bradley, Fred.....	11	Mich.....	Rogers City
Bradley, Michael J.....	3	Pa.....	Philadelphia
Brehm, Walter E.....	11	Ohio.....	Logan
Brooks, Overton.....	4	La.....	Shreveport
Brown, Clarence J.....	7	Ohio.....	Blanchester
Brown, Paul.....	10	Ga.....	Elberton
Brumbaugh, D. Emmert....	23	Pa.....	Claysburg
Bryson, Joseph R.....	4	S.C.....	Greenville
Buckley, Charles A.....	23	N.Y.....	New York City
Buffett, Howard H.....	2	Neb.....	Omaha
Bulwinkle, Alfred L.....	11	N.C.....	Gastonia
Burch, Thomas G.....	5	Va.....	Martinsville
Burchill, Thomas F.....	15	N.Y.....	New York City
Burdick, Usher L.....	At L.	N.D.....	Williston
Burgin, W. O.....	8	N.C.....	Lexington
Busbey, Fred E.....	3	Ill.....	Chicago
Bulter, John C.....	42	N.Y.....	Buffalo
Byrne, William T.....	28	Ga.....	Loudonville
Camp, A. Sidney.....	4	N.J.....	Newnan
Canfield, Gordon.....	8	N.J.....	Paterson
Cannon, Clarence.....	9	Miss.....	Elsberry
Cannon, Pat.....	4	Fla.....	Miami
Capozzoli, Louis J.....	13	N.Y.....	New York City
Carlson, Frank.....	6	Kan.....	Concordia
Carson, Henderson H.....	16	Ohio.....	Canton
Carter, Albert E.....	6	Calif.....	Oakland
Case, Francis.....	2	S.D.....	Custer
Celler, Emanuel.....	10	N.Y.....	Brooklyn
Chapman, Virgil.....	6	Ky.....	Paris
Chenoweth, J. Edgar.....	3	Colo.....	Trinidad
Chiperfield, Robert B....	15	Ill.....	Canton
Church, Ralph E.....	10	Ill.....	Evanston
Clark, J. Bayard.....	7	N.C.....	Fayetteville
Clason, Charles R.....	2	Mass.....	Springfield
Clewenger, Cliff.....	5	Ohio.....	Bryan
Cochran, John J.....	13	Miss.....	St. Louis
Coffee, John M.....	6	Wash.....	Tacoma
Cole, William C.....	3	Mo.....	St. Joseph
Cole, W. Sterling.....	37	N.Y.....	Bath
Colmer, William M.....	6	Miss.....	Pascagoula
Compton, Ranulf.....	3	Conn.....	Madison
Cooley, Harold D.....	4	N.C.....	Nashville
Cooper, Jere.....	9	Tenn.....	Dyersburg
Costello, John M.....	15	Calif.....	Hollywood
Courtney, Wirt.....	7	Tenn.....	Franklin
Cox, E. E.....	2	Ga.....	Camilla
Cravens, Fadio.....	4	Ark.....	Fort Smith
Crawford, Fred L.....	8	Mich.....	Saginaw
Crosser, Robert.....	21	Ohio.....	Cleveland
Cullen, Thomas H.....	4	N.Y.....	Brooklyn
Cunningham, Paul.....	5	Iowa.....	Des Moines
Curley, James M.....	11	Mass.....	Boston
Curtis, Carl T.....	1	Neb.....	Minden
D'Alessandro, Thomas, Jr.	3	Md.....	Baltimore
Davis, Clifford.....	10	Tenn.....	Memphis
Dawson, William L.....	1	Ill.....	Chicago
Day, Stephen A.....	At L.	Ill.....	Evanston
Delaney, John J.....	7	N.Y.....	Brooklyn
Dewey, Charles S.....	9	Ill.....	Chicago
Dickstein, Samuel.....	12	N.Y.....	New York City
Dies, Martin.....	2	Tex.....	Orange
Dillweg, La Vern R.....	8	Wis.....	Green Bay
Dingell, John D.....	15	Mich.....	Detroit
Dirksen, Everett M.....	16	Ill.....	Pekin
Disney, Wesley E.....	1	Okla.....	Tulsa
Domengeaux, James.....	3	La.....	Lafayette
Dondero, George A.....	17	Mich.....	Royal Oak
Doughton, Robert L.....	9	N.C.....	Laurel Springs
Douglas, Fred J.....	33	N.Y.....	Utica
Drewry, Patrick H.....	4	Va.....	Petersburg
Durham, Carl T.....	6	N.C.....	Chapel Hill
Dworshak, Henry C.....	2	Idaho.....	Burley
Eaton, Charles A.....	5	N.J.....	Watchung, Plainfield
Eberharther, Herman P....	31	Pa.....	Pittsburgh
Elliott, Alfred J.....	10	Calif.....	Tulare
Ellis, Hubert S.....	10	W.Va.....	Huntington
Ellison, Daniel.....	4	Md.....	Baltimore
Ellsworth, Harris.....	4	Ore.....	Roseburg
Elmer, William P.....	8	Mo.....	Salem
Elston, Charles H.....	1	Ohio.....	Cincinnati
Engel, Albert J.....	9	Mich.....	Muskegon
Engle, Clair.....	2	Calif.....	Red Bluff
Fay, James H.....	16	N.Y.....	New York City
Feighan, Michael A.....	20	Ohio.....	Cleveland
Fellows, Frank.....	3	Me.....	Bangor
Fenton, Ivor D.....	13	Pa.....	Mahanoy City
Fernandez, Antonio M....	At L.	N.M.....	Santa Fe
Fish, Hamilton.....	26	N.Y.....	Garrison
Fisher, O. C.....	21	Tex.....	San Angelo
Fitzpatrick, James M....	24	N.Y.....	New York City
Flannagan, John W., Jr..	9	Va.....	Bristol
Fogarty, John E.....	2	R.I.....	Harmony
Folger, John H.....	5	N.C.....	Mount Airy
Forand, Aime J.....	1	R.I.....	Cumberland
Ford, Thomas F.....	14	Calif.....	Los Angeles
Fulbright, J. William....	3	Ark.....	Fayetteville
Fuller, Hadwen C.....	32	N.Y.....	Parish
Fulmer, Hampton P.....	2	S.C.....	Orangeburg
Furlong, Grant.....	25	Pa.....	Donora
Gale, Richard P.....	3	Minn.....	Mound
Gallagher, James.....	1	Pa.....	Philadelphia
Gamble, Ralph A.....	25	N.Y.....	Larchmont
Gathings, E. C.....	1	Ark.....	West Memphis
Gavagan, Joseph A.....	21	N.Y.....	New York City
Gavin, Leon H.....	20	Pa.....	Oil City
Gearhart, Bertrand W....	9	Calif.....	Fresno
Gerlach, Charles L.....	9	Pa.....	Allentown
Gibson, John S.....	8	Ga.....	Douglas
Gifford, Charles L.....	9	Mass.....	Cotuit
Gilchrist, Fred C.....	6	Iowa.....	Laurens
Gillette, Wilson D.....	15	Pa.....	Towanda
Gillie, George W.....	4	Ind.....	Fort Wayne
Goodwin, Angier L.....	8	Mass.....	Melrose
Gordon, Thomas S.....	8	Ill.....	Chicago
Gore, Albert.....	4	Tenn.....	Carthage
Gorski, Martin.....	4	Ill.....	Chicago
Gossett, Ed.....	13	Tex.....	Wichita Falls
Graham, Louis E.....	26	Pa.....	Beaver
Granger, Walter K.....	1	Utah.....	Cedar City
Grant, George M.....	2	Ala.....	Troy
Grant, Robert A.....	3	Ind.....	South Bend
Green, Lex.....	At L.	Fla.....	Starke
Gregory, Noble J.....	1	Ky.....	Mayfield
Griffiths, P. W.....	15	Ohio.....	Marietta
Gross, Chester H.....	22	Pa.....	Manchester
Gwynne, John W.....	3	Iowa.....	Waterloo
HAGEN, HAROLD C.....	9	Minn.....	Crookston
Hale, Robert.....	1	Me.....	Portland
Hall, Edwin Arthur.....	34	N.Y.....	Binghamton

Name	Dist.	State	City
Hall, Leonard W.....	1	N.Y.....	Oyster Bay
Halleck, Charles A.....	2	Ind.....	Rensselaer
Hancock, Clarence E.....	35	N.Y.....	Syracuse
Hare, Butler B.....	3	S.C.....	Saluda
Harless, Richard F.....	At L.	Ariz.....	Phoenix
Harness, Forest A.....	5	Ind.....	Elk Loma
Harris, Oren.....	7	Ark.....	El Dorado
Harris, Winder R.....	2	Va.....	Norfolk
Hart, Edward J.....	14	N.J.....	Jersey City
Hartley, Fred A., Jr.....	10	N.J.....	Kearny
Hays, Brooks.....	5	Ark.....	Little Rock
Hébert, F. Edward.....	1	La.....	New Orleans
Heffernan, James J.....	5	N.Y.....	Brooklyn
Heidinger, James V.....	24	Ill.....	Fairfield
Hendricks, Joe.....	5	Fla.....	De Land
Herter, Christian A.....	10	Mass.....	Boston
Hess, William E.....	2	Ohio.....	Cincinnati
Hill, William S.....	2	Colo.....	Fort Collins
Hinshaw, Carl.....	20	Calif.....	Pasadena
Hobbs, Sam.....	4	Ala.....	Selma
Hoch, Daniel K.....	14	Pa.....	Reading
Hoeven, Charles B.....	8	Iowa.....	Alton
Hoffman, Clare E.....	4	Mich.....	Allegan
Holfield, Chet.....	19	Calif.....	Montebello
Holmes, Hal.....	4	Wash.....	Ellensburg
Holmes, Pehr G.....	4	Mass.....	Worcester
Hope, Clifford R.....	5	Kan.....	Garden City
Horan, Walt.....	5	Wash.....	Wenatchee
Howell, Evan.....	21	Ill.....	Springfield
HULL, MERLIN.....	9	Wis.....	Black River Falls
Izac, Ed. V.....	23	Calif.....	San Diego
Jackson, Henry M.....	2	Wash.....	Everett
Jarman, Pete.....	6	Ala.....	Livingston
Jeffrey, Harry P.....	3	Ohio.....	Dayton
Jenkins, Thomas A.....	10	Ohio.....	Ironton
Jennings, John, Jr.....	2	Tenn.....	Knoxville
Jensen, Ben F.....	7	Iowa.....	Exira
Johnson, Anton J.....	14	Ill.....	Macomb
Johnson, Calvin D.....	22	Ill.....	Belleville
Johnson, Jed.....	6	Okla.....	Anadarko
Johnson, J. Leroy.....	3	Calif.....	Stockton
Johnson, Luther A.....	6	Tex.....	Corsicana
Johnson, Lyndon B.....	10	Tex.....	Johnson City
Johnson, Noble J.....	6	Ind.....	Terre Haute
Johnson, Ward.....	18	Calif.....	Long Beach
Jones, Robert F.....	4	Ohio.....	Lima
Jonkman, Bartel J.....	5	Mich.....	Grand Rapids
Judd, Walter H.....	5	Minn.....	Minneapolis
Kean, Robert W.....	12	N.J.....	Livingston
Kearney, Bernard W. (Pat).....	30	N.Y.....	Gloversville
Kee, John.....	5	W.Va.....	Bluefield
Keefe, Frank B.....	6	Wis.....	Oshkosh
Kefauver, Estes.....	3	Tenn.....	Chattanooga
Kelley, Augustine B.....	28	Pa.....	Greensburg
Kennedy, Martin J.....	18	N.Y.....	New York City
Keogh, Eugene J.....	9	N.Y.....	Brooklyn
Kerr, John H.....	2	N.C.....	Warrenton
Kilburn, Clarence E.....	31	N.Y.....	Malone
Kilday, Paul J.....	20	Tex.....	San Antonio
King, Cecil R.....	17	Calif.....	Los Angeles
Kinzer, J. Roland.....	10	Pa.....	Lancaster
Kirwan, Michael J.....	19	Ohio.....	Youngstown
Kleberg, Richard M.....	14	Tex.....	Corpus Christi
Klein, Arthur G.....	14	N.Y.....	New York City
Knutson, Harold.....	6	Minn.....	St. Cloud
Kunkel, John C.....	19	Pa.....	Harrisburg
LaFollette, Charles M.....	8	Ind.....	Evansville
Lambertson, William P.....	1	Kan.....	Fairview
Landis, Gerald W.....	7	Ind.....	Linton
Lane, Thomas J.....	7	Mass.....	Lawrence
Lanham, Fritz G.....	12	Tex.....	Fort Worth
Larcade, Henry D., Jr.....	7	La.....	Opelousas
Lea, Clarence F.....	1	Calif.....	Santa Rosa
LeCompte, Karl M.....	4	Iowa.....	Corydon
LeFebvre, Jay.....	27	N.Y.....	New Paltz
Lemke, William.....	At L.	N.D.....	Fargo
Lesinski, John.....	16	Mich.....	Dearborn
Lewis, Earl R.....	18	Ohio.....	St. Clairsville
Lewis, Lawrence.....	1	Colo.....	Denver
Luce, Clare Bothe.....	4	Conn.....	Greenwich
Ludlow, Louis.....	11	Ind.....	Indianapolis
Lynch, Walter A.....	22	N.Y.....	New York City
McCord, Jim.....	5	Tenn.....	Lewisburg
McCormack, John W.....	12	Mass.....	Boston
McCoven, Edward O.....	6	Ohio.....	Wheelerburg
McGehee, Dan R.....	7	Miss.....	Meadville
McGregor, J. Harry.....	17	Ohio.....	West Lafayette
McKenzie, Charles E.....	5	La.....	Monroe
McLean, Donald H.....	6	N.J.....	Elizabeth
McMillan, John L.....	6	S.C.....	Florence
McMurray, Howard J.....	5	Wis.....	Milwaukee
McWilliams, John D.....	2	Conn.....	Norwich
Maas, Melvin J.....	4	Minn.....	St. Paul
Madden, Ray J.....	1	Ind.....	Gary
Magnuson, Warren G.....	1	Wash.....	Seattle
Mahon, George H.....	19	Tex.....	Colorado City
Maloney, Paul H.....	2	La.....	New Orleans
Manasco, Carter.....	7	Ala.....	Jasper
Mansfield, Joseph J.....	9	Tex.....	Columbus
Mansfield, Mike.....	1	Mont.....	Missoula

Name	Dist.	State	City
MARCANTONIO, VITO.....	20	N.Y.....	New York City
Martin, Joseph W., Jr.....	14	Mass.....	North Attleboro
Martin, Thomas E.....	1	Iowa.....	Iowa City
Mason, Noah M.....	12	Ill.....	Oglesby
May, Andrew J.....	7	Ky.....	Prestonsburg
Merritt, Matthew J.....	At L.	N.Y.....	Malba (Flushing)
Merron, Chester E.....	1	N.H.....	Center Ossipee
Michener, Earl C.....	2	Mich.....	Adrian
Miller, A. L.....	4	Neb.....	Kimball
Miller, Louis E.....	11	Mo.....	St. Louis
Miller, Thomas Byron.....	12	Pa.....	Plymouth
Miller, William J.....	1	Conn.....	Wethersfield
Mills, Wilbur D.....	2	Ark.....	Kensett
Monkiewicz, B. J.....	At L.	Conn.....	New Britain
Monroney, A. S. Mike.....	5	Okla.....	Oklahoma City
Morrison, Cameron.....	10	N.C.....	Charlotte
Morrison, James H.....	6	La.....	Hammond
Mott, James W.....	1	Or.....	Salem
Mruk, Joseph.....	41	N.Y.....	Buffalo
Mundt, Karl E.....	1	S.D.....	Madison
Murdock, John R.....	At L.	Ariz.....	Tempe
Murphy, John W.....	11	Pa.....	Dunmore
Murray, Reid P.....	7	Wis.....	Ogdensburg
Murray, Tom.....	8	Tenn.....	Jackson
Myers, Francis J.....	6	Pa.....	Philadelphia
Newsome, John P.....	9	Ala.....	Birmingham
Norman, Fred.....	3	Wash.....	Raymond
Norrell, W. F.....	6	Ark.....	Monticello
Norton, Mary T.....	13	N.J.....	Jersey City
O'Brien, George D.....	13	Mich.....	Detroit
O'Brien, Joseph J.....	38	N.Y.....	East Rochester
O'Brien, Thomas J.....	6	Ill.....	Chicago
O'Connor, James F.....	2	Mont.....	Livingston
O'Hara, Joseph P.....	2	Minn.....	Glencoe
O'Konski, Alvin E.....	10	Wis.....	Mercer
O'Leary, James A.....	11	N.Y.....	West New Brighton
O'Neal, Emmet.....	3	Ky.....	Louisville
O'Toole, Donald L.....	8	N.Y.....	Brooklyn
Outland, George E.....	11	Calif.....	Santa Barbara
Pace, Stephen.....	3	Ga.....	Americus
Patman, Wright.....	1	Tex.....	Texarkana
Patton, Nat.....	7	Tex.....	Crockett
Peterson, Hugh.....	1	Ga.....	Ailey
Peterson, J. Hardin.....	1	Fla.....	Lakeland
Pfeifer, Joseph L.....	3	N.Y.....	Brooklyn
Phillips, Philip J.....	3	Mass.....	Clinton
Phillips, John.....	22	Calif.....	Banning
Pittenger, William A.....	8	Minn.....	Duluth
Ploeser, Walter C.....	12	Mo.....	St. Louis
Plumley, Charles A.....	At L.	Vt.....	Northfield
Poage, W. R.....	11	Tex.....	Waco
Poulson, Norris.....	13	Calif.....	Los Angeles
Powers, D. Lane.....	4	N.J.....	Trenton
Pracht, C. Frederick.....	5	Pa.....	Philadelphia
Price, Emory H.....	2	Fla.....	Jacksonville
Priest, J. Percy.....	6	Tenn.....	Nashville
Rabaut, Louis C.....	14	Mich.....	Grosse Pointe Park
Ramey, Homer A.....	9	Ohio.....	Toledo
Ramspeck, Robert.....	5	Ga.....	Atlanta
Randolph, Jennings.....	2	W.Va.....	Elkins
Rankin, John E.....	1	Miss.....	Tupelo
Rayburn, Sam.....	4	Tex.....	Bonham
Reece, B. Carroll.....	1	Tenn.....	Johnson City
Reed, Chauncey W.....	11	Ill.....	West Chicago
Reed, Daniel A.....	43	N.Y.....	Dunkirk
Rees, Edward H.....	4	Kan.....	Emporia
Richards, James P.....	5	S.C.....	Lancaster
Rivers, L. Mendel.....	1	S.C.....	North Charleston
Rizley, Ross.....	8	Okla.....	Guymon
Robertson, A. Willis.....	7	Va.....	Lexington
Robinson, J. W.....	2	Utah.....	Provo
Robison, John M.....	9	Ky.....	Barbourville
Rockwell, Robert F.....	4	Colo.....	Paonia
Rodgers, Robert L.....	29	Pa.....	Erie
Rogers, Edith Nourse.....	5	Mass.....	Lowell
Rogers, Will, Jr.....	16	Calif.....	Culver City
Rohrbough, Edward G.....	3	W.Va.....	Glenville
Rolph, Thomas.....	4	Calif.....	San Francisco
Rowan, William A.....	2	Ill.....	Chicago
Rowe, Ed.....	14	Ohio.....	Akron
Russell, Sam M.....	17	Tex.....	Stephenville
Sabath, Adolph J.....	5	Ill.....	Chicago
Sadowski, George G.....	1	Mich.....	Detroit
Sasscer, Lansdale G.....	5	Md.....	Upper Marlboro
Satterfield, Dave E., Jr.....	3	Va.....	Richmond
SAUTHOFF, HARRY.....	2	Wis.....	Madison
Scanlon, Thomas E.....	16	Pa.....	Pittsburgh
Schiffler, Andrew C.....	1	W.Va.....	Wheeling
Schuetz, Leonard W.....	7	Ill.....	Chicago
Schwabe, Max.....	2	Mo.....	Columbia
Scott, Hugh D., Jr.....	7	Pa.....	Philadelphia
Scriener, Brett P.....	2	Kan.....	Kansas City
Shaffer, Paul W.....	3	Mich.....	Battle Creek
Sheppard, Harry R.....	21	Calif.....	Yucaipa
Sheridan, John Edward.....	4	Pa.....	Philadelphia
Short, Dewey.....	7	Mo.....	Galena
Sikes, Robert L. F.....	3	Fla.....	Greenville
Simpson, Richard M.....	18	Pa.....	Huntingdon
Simpson, Sid.....	20	Ill.....	Carrollton
Slaughter, Roger C.....	5	Mo.....	Kansas City

HOUSE OF REPRESENTATIVES (continued)

Name	Dist.	State	City
Smith, Frederick C.	8	Ohio	Marion
Smith, Howard W.	8	Va.	Alexandria
Smith, Joe L.	6	W. Va.	Beckley
Smith, Lawrence H.	1	Wis.	Racine
Smith, Margaret Chase	2	Me.	Skowhegan
Snyder, J. Buell	24	Pa.	Perryopolis
Somers, Andrew L.	6	N.Y.	Brooklyn
Sparkman, John J.	8	Ala.	Huntsville
Spence, Brent	5	Ky.	Fort Thomas
Springer, Raymond S.	10	Ind.	Connersville
Stanley, Winifred C.	At L.	N.Y.	Buffalo
Starnes, Joe	5	Ala.	Guntersville
Stearns, Foster	2	N.H.	Hancock
Stefan, Karl	3	Neb.	Norfolk
Stevenson, William H.	3	Wis.	La Crosse
Stewart, Paul	3	Okla.	Antlers
Stockman, Lowell	2	Ore.	Pendleton
Sullivan, Maurice J.	At L.	Nev.	Reno
Sumner, Jessie	18	Ill.	Milford
Sumners, Hutton W.	5	Tex.	Dallas
Sundstrom, Frank L.	11	N.J.	East Orange
Taber, John	36	N.Y.	Auburn
Talbot, Joseph E.	5	Conn.	Naugatuck
Talle, Henry O.	2	Iowa	Decorah
Tarver, Malcolm C.	7	Ga.	Dalton
Taylor, Dean P.	29	N.Y.	Troy
Thomas, Albert	8	Tex.	Houston
Thomas, J. Parnell	7	N.J.	Allendale
Thomason, R. Ewing	16	Tex.	El Paso
Tibbott, Harve	27	Pa.	Ebensburg
Tolan, John H.	7	Calif.	Oakland
Towe, Harry L.	9	N.J.	Rutherford
Treadway, Allen I.	1	Mass.	Stockbridge
Troutman, William	At L.	Pa.	Shamokin
Vincent, Beverly M.	2	Ky.	Brownsville
Vinson, Car	6	Ga.	Milledgeville
Voorhis, Jerry	12	Calif.	San Dimas
Vorys, John M.	12	Ohio	Columbus
Vursell, Charles W.	23	Ill.	Salem
Wadsworth, James W.	39	N.Y.	Genesee
Walter, Francis E.	21	Pa.	Easton
Ward, David J.	1	Md.	Salisbury
Wasielewski, Thad F.	4	Wis.	Milwaukee
Weaver, Zebulon	12	N.C.	Asheville
Welch, Alvin F.	13	Ohio	Sandusky
Weiss, Samuel A.	30	Pa.	Glassport
Welch, Richard J.	5	Calif.	San Francisco
Wene, Elmer H.	2	N.J.	Vineland
West, Milton H.	15	Tex.	Brownsville
Wheat, William H.	19	Ill.	Rantoul
Whelchel, B. Frank	9	Ga.	Gainesville
White, Compton L.	1	Idaho	Clark Fork
Whitten, Jamie L.	2	Miss.	Charleston
Whittington, W. M.	3	Miss.	Greenwood
Wickersham, Victor	7	Okla.	Mangum
Wigglesworth, R. B.	13	Mass.	Milton
Willey, Earle D.	At L.	Del.	Dover
Wilson, Earl	9	Ind.	Bedford
Winstead, Arthur	5	Miss.	Philadelphia
Winter, Thomas D.	3	Kan.	Girard
Wolcott, Jesse P.	7	Mich.	Port Huron
Wolfenden, James	8	Pa.	Upper Darby
Wolverton, Charles A.	1	N.J.	Merchantville
Woodruff, Roy O.	10	Mich.	Bay City
Woodrum, Clifton A.	6	Va.	Roanoke
Worley, Eugene	18	Tex.	Shamrock
Wright, James A.	32	Pa.	Carnegie
Zimmerman, Orville	10	Mo.	Kennett

HOUSING. See CONSTRUCTION INDUSTRY; NATIONAL HOUSING AGENCY; NEW ZEALAND under *History*; PHILANTHROPY under *Buhl Foundation*; ROADS AND STREETS; SANITATION; STATE LEGISLATION under *War and Postwar*; WATER SUPPLY. Compare HEATING; LIVING COSTS; RENTS, ETC.

HOWLAND ISLAND. A mid-Pacific island (0° 49' N. and 176° 40' W.), belonging to the United States. It lies athwart the main steamship lanes and the Pan American Airways route from Honolulu to New Zealand and Australia. An aerological station was established here during 1936 by the U.S. Department of the Interior (see YEAR BOOK for 1936, p. 79, under BAKER, HOWLAND, AND JARVIS ISLANDS). An airfield was constructed during 1937. The aerological installations were attacked by Japanese planes after the outbreak of war on Dec. 7, 1941. Early in 1942 four youths stationed there were evacuated. U.S. military forces were reportedly stationed on the island.

HUNGARY. A kingdom in central Europe. Capital, Budapest. Regent, Admiral Nicholas Horthy de Nagybánya (elected Mar. 1, 1920).

Area and Population. Excluding Yugoslav territories occupied in April, 1941 (approximately 4,600 square miles with a census population of 1,028,000 on Oct. 10, 1941), Hungary had an area of 61,872 square miles and a population of 13,643,600 at the census of Jan. 31, 1941, as compared with 35,875 square miles and a population estimated at 9,034,815 in 1937. An area of 4,605 square miles, with a 1941 census population of 1,058,000, was annexed from Czechoslovakia under the Italo-German arbitral award of Nov. 2, 1938. Another 4,690 square miles (population, 698,000 in 1941) was acquired through the annexation of Ruthenia (Carpatho-Ukraine) and additional parts of Slovakia in March-April, 1939. On Aug. 30, 1940, an Italo-German award transferred to Hungary from Rumania 16,642 square miles in Northern Transylvania with a population of 2,392,603.

According to the 1941 census, Magyars comprised 75 per cent of the population (92.1 per cent in 1930), Rumanians 8 per cent, Germans 6 per cent, Ruthenians 4 per cent, Serbs and Croats 3 per cent, Slovaks 2 per cent, Jews 1 per cent. The live birth rate for 1942 was 21.5 per cent (21.1 in 1941); death rate, 15.4 (14.1). Populations of the chief cities in 1939 were: Budapest, 1,115,877 (1,162,800 on Jan. 31, 1941); Szeged 181,893, Debrecen, 122,517; Kolozsvár, 100,844; Kecskemét, 83,732; Nagyvárad, 82,687; Miskolc, 73,503; Ujpest, 72,940.

Education and Religion. The 1930 census showed 9.6 per cent of the population over six years of age to be illiterate. In 1938-39 there were 1,407 infants' schools with 133,288 children, 8,103 elementary schools with 1,104,916 pupils, 263 middle schools with 79,435 pupils, numerous primary and secondary vocational and special schools, five state-supported universities with 9,823 students (excluding the University of Kolozsvár in Northern Transylvania, acquired from Rumania on Aug. 30, 1940), and 29 theological colleges with 1,229 students.

According to the 1930 census, Roman Catholics comprised 64.9 per cent of the population within the Treaty of Trianon boundaries, Helvetian Evangelicals 20.9 per cent, Augsburg Evangelicals 6.1 per cent, Jews 5.1 per cent, Greek Catholics 2.3.

Production. Slightly more than half of the working population is engaged in agriculture and nearly one-fourth in industry and mining. Estimated yields of the chief crops in 1940, including all annexed territories except Northern Transylvania, were (in metric tons): Wheat, 2,067,463; rye 724,122; barley, 693,102; oats, 434,324; corn, 2,964,038; potatoes, 3,441,353; sugar beets, 1,758,209; tobacco, 16,548; fodder turnips, 3,975,845 in 1939. The wine output in 1939 was 96,145,590 gal. The same territory had 2,605,490 cattle, 1,750,221 sheep, 4,643,463 swine, and 989,450 horses in 1940. The annexations of 1938-41 increased the forested area from 4,921,762 to 6,420,000 acres. Delivery of heavy timber for beams increased to 127,000 cubic meters in 1942 from 99,000 in 1941. Mineral and metallurgical output in 1940 was (in metric tons): Lignite, 10,306,000; coal, 1,207,000; manganese (metal content), 15,700 in 1939; iron ore (metal content), 230,000; pig iron and ferro-alloys, 432,000; steel, 751,000; aluminum, 1,500. The principal manufacturing industries are milling, distilling, sugar refining, petroleum refining, and iron and steel works. In 1939 there were 4,334 industrial plants employing 341,636 workmen.

Foreign Trade. Merchandise imports in 1942 were valued at 922,800,000 pengő (729,600,000 in 1941); exports, 1,142,400,000 pengős (790,800,000 in 1941). For the distribution of imports and exports in 1941, see 1943 YEAR BOOK.

Finance. Budget estimates for the calendar year 1943 placed revenues at 4,047,000,000 pengős and expenditures at 4,247,400,000 pengős. The public debt rose from 1,937,400,000 pengős on June 30, 1939, to 4,869,000,000 pengős on Sept. 30, 1942. Official exchange rate of the pengő in 1942, \$0.1949; average exchange rate in 1940, \$0.1848; in the first half of 1941, \$0.1977. Currency in circulation rose from 975,000,000 pengős on Dec. 31, 1939, to 3,201,000,000 on June 30, 1943.

Transportation. Excluding Northern Transylvania, the railway trackage in 1940 extended 9,321 miles (mostly state-owned). There were 51,049 miles of roads. Air lines connected Budapest with the principal Hungarian cities and with Vienna, Breslau, and Berlin. The Danube and its tributaries form an important transportation artery.

Government. The monarchical constitution in effect prior to the republican revolution of Oct. 31, 1918, was restored in 1920, but the throne remained vacant. The head of the state in 1943 was the Regent, Admiral Horthy (elected Mar. 1, 1920). A law of July 15, 1937, ended the Regent's responsibility to Parliament. Parliament consisted of an Upper House of about 278 members (76 elected by counties and cities, 95 life members appointed by the Regent, and the rest representing various privileged groups) and a Lower Chamber of 333 members, including representatives of annexed territories, chosen for five years by popular male and female suffrage. In 1939 the secret ballot was introduced for the election of Deputies. The Upper Chamber is partly reconstituted every five years.

The principal political parties in 1943, with their standing in the Lower Chamber, were: Party of Hungarian Life (nationalist and Christian), 185; Arrow Cross (Hungarian Nazi) party, 42; Transylvanian party, 41; Rejuvenation (pro-fascist) party, 20. Premier at the beginning of 1943, Nicholas Kallay, appointed Mar. 7, 1942.

Hungary adhered to the anti-Comintern Pact Feb. 24, 1939, and to the Three Power Pact, or Axis alliance, on Nov. 20, 1940. It participated in the German invasion of Yugoslavia and declared a state of war with the Soviet Union June 27, 1941, and with the United States Dec. 13, 1941. For war declarations against Hungary, see table under WORLD WAR. See below for developments during 1943.

HISTORY

Effect of Allied Victories. The steady progress of Allied arms during 1943 brought Hungary face to face with the disastrous consequences of the Horthy regime's pro-Axis policy. It was exposed to the imminent danger of destructive air attacks and to invasion and occupation by either Germany, Russia, or the Anglo-American armies. The grim prospect developed that Hungary, like Italy, would become a battleground for the stronger warring powers and an arena for political and social revolution. This intensified all of the internal and external tensions that had menaced the Horthy regime in 1942 (see 1943 YEAR BOOK).

The aged Regent and the Government of Premier Nicholas Kallay, which was controlled by the landed aristocracy, sought desperately for means of escape from the slowly tightening trap. They made repeated secret peace proposals to the Anglo-

American powers under which Hungary would be permitted to withdraw from the war at the opportune moment without sacrificing the territories recently seized from Czechoslovakia, Rumania, and Yugoslavia. The invariable reply was a stern demand for "unconditional surrender." They approached Turkey and the exiled Governments of Greece and Yugoslavia with belated offers of Hungarian support for a revived Balkan Entente—designed to bolster the independence of the Balkan states—but made no perceptible headway.

They strove desperately to resist German political penetration without provoking German military occupation, meanwhile preparing for the seemingly inevitable armed clash with Rumania over Transylvania. At the same time they resisted the revolutionary social and economic demands of the Hungarian Nazis on the Right and of the socialist and pro-democratic elements on the Left, while carrying on a bitter warfare with Communist and other underground elements.

German Pressure Resisted. Fear of a German defeat, coupled with growing determination to resist German pressures, was reflected in developments in Hungary during January. The two Hungarian army corps in Russia, estimated at 200,000 to 300,000 men, lost heavily during the Russian winter offensive on the Voronezh front, according to an admission by Premier Kallay on January 23. The Hungarian Government then called home most of these divisions and began the repatriation of 30,000 Hungarian workers from Germany, despite German demands for greater military and economic aid. At the same time Turkish reports said that 45,000 Hungarian workers had been drafted for the construction of fortifications in the Carpathians as a precaution against a Russian break-through from the Ukraine.

In defiance of German demands for enactment of the Nuremberg laws in Hungary, the Government on January 11 equalized the wages paid to Jews and other Hungarians serving in obligatory auxiliary labor organizations. About the same time Justinian Cardinal Seregi, Roman Catholic Primate of Hungary, strongly attacked the Nazi racial and nationalist doctrines as contrary to Christ's teachings. He declared that the Hungarian clergy would refuse to serve them. From Berne, Switzerland, it was reported on January 12 that the underground political groups in Hungary had established a "national front of independence." In the same month Count Stephen Bethlen, former Hungarian Premier and leader of a coalition of Right and Center groups, reportedly visited Switzerland and Rome in an attempt to initiate peace negotiations with the Allies.

German attempts to secure Hungarian troops for service against Greek and Yugoslav guerrillas were side-stepped in Budapest, and a Berlin demand for total mobilization was bluntly rejected. Hitler then enlisted Mussolini's aid in bringing Hungary into line. Early in April Premier Kallay was invited to Rome, but his talks with Mussolini produced no change in Hungarian policy. The Fuehrer next called Regent Horthy to his headquarters, where further conferences were held for two days, with the highest German and Hungarian army officers in attendance.

At the conclusion of these conferences on April 18 a Berlin communiqué announced that "Hungary as well as Italy and Rumania have now made it definitely clear that they will continue the war until victory, and that they are making no distinction between the Soviet Union and the Soviet Union's Western Allies . . ." Berlin broadcasts de-

clared that Horthy had promised to oppose any Anglo-American invasion of the Balkans and agreed to "mobilize all Hungary's forces." There were reports that Hitler also urged Horthy to permit the transfer of bombed-out German war industries to Hungary. Subsequent developments indicated that whatever concessions Horthy made were exacted under the threat of German occupation of Hungary and were evaded at the first opportunity.

Parliament Suspended. Soon after the Regent's return to Budapest he suspended Parliament for six months at the request of Premier Kallay. The adjournment of Parliament was described as a move to check an anti-Government propaganda drive by Hungarian Nazi deputies against the Premier's alleged pro-Jewish and pro-Leftist policies. This drive apparently was timed to reinforce pressure from Germany. Meanwhile more Hungarian troops were withdrawn from Russia. Premier Kallay, disclaiming any personal responsibility for Hungarian participation in the attack on Russia, publicly declared that the country could only bear sacrifices in proportion to its strength.

A semi-official statement issued in Budapest early in June asserted that there had been no expansion of Hungary's industrial plants during the preceding 18 months and that none was contemplated. The statement was obviously calculated to avert Allied bombing raids. The resignation of War Minister Col. Gen. William Nagy, who was replaced by Col. Gen. Ludwig von Csata, and the arrest of 372 persons in Budapest on suspicion of violating national security regulations was announced June 12. The German radio on June 27 quoted Premier Kallay as stating that all remaining Jewish property in Hungary would pass into "aryan" hands at the end of the year. But this apparent concession to Berlin was followed by Hungary's refusal to aid the Axis in the defense of Italy, by Cairo reports of new Hungarian peace feelers, and by orders to pro-Nazi organs in Hungary to cease hostile criticism of Britain and the United States.

New Peace Feelers. The overthrow of Mussolini on July 25 was a severe blow to the Horthy regime, which had repeatedly benefited by Il Duce's diplomatic aid against both Germany and the Allied powers. On the previous day, Premier Kallay relinquished the Foreign Ministry to Jeno von Ghyczy, who was said in some quarters to have been selected to carry forward negotiations for a separate peace with the Allies. The Germans reportedly made a new demand on Hungary for troops to replace the Italian garrisons in the Balkans. While rejecting this bid, the Government reportedly agreed to increase shipments of agricultural and industrial products to the Reich.

The Allied advances in Italy and heavy Allied air raids on Ploesti, Rumania, and Wiener Neustadt, Austria, caused growing alarm in Hungary. Repeated attempts were made to convince the Allies that Hungary was aiding Germany as little as possible. Premier Kallay in mid-August declared that there were no German troops in Hungary and that all airfields and other military establishments were in Hungarian hands. Attempts were made to declare Budapest an open city. Anti-Nazi elements in Hungary grew bolder, demanding that the Government take Hungary out of the war immediately. After a special session of the Cabinet, the Budapest radio on August 29 declared that the Government had "but one aim at present, and that is peace." But to his own followers in Hungary, Premier Kallay insisted that he wanted only

a "peace which leaves the country's territorial integrity intact." In mid-September the Budapest radio began broadcasting British, American, and Russian as well as German war communiqués.

Germany Cracks the Whip. After the rescue of Mussolini by the Germans and the establishment of his Republican Fascist regime, a new German-Hungarian crisis arose over the Kallay Cabinet's decision on September 29 to recommend that the Regent continue to recognize Marshal Badoglio as "the sole legal representative of King Victor Emmanuel." Berlin demanded immediate reconsideration of this decision. Under the threat of German intervention, the Government then announced that it had recognized Mussolini's government at Germany's request but that Hungary was not in a position to "take up direct communication" with it.

The success of the Germans in retaining control of the Balkans and most of Italy following the Badoglio Government's capitulation early in September relieved Hungarian fears of an immediate Allied invasion of the Danubian basin. However it was recognized that a new crisis would develop in the spring, and all the Hungarian factions intensified their efforts to shape the coming crisis to their interests. Spreading guerrilla activities in Yugoslavia and outbreaks of sabotage and anti-Government disorders in southern Hungary led to the proclamation of martial law in several southern Hungarian districts early in October. Late that month Communist-led Partisan bands reportedly crossed into Hungary from Croatia. There were new clashes between Rumanian and Hungarian troops along the Transylvanian frontier.

To Resist Invasion. Parliament was reconvened in October at the request of the Social Democratic and Small Farmers' parties. In a series of speeches on foreign policy during December Premier Kallay declared that Hungary would resist any attempt at invasion from whatever quarter it came, that the Government was determined to maintain the Vienna Award under which it obtained part of Transylvania from Rumania, and that only the fear of bolshevism kept Hungary, Rumania, and Bulgaria in the war. Meanwhile the Horthy regime was reported making preparations for a counter-revolutionary movement that would go underground and await its opportunity in the event of the overthrow of the state through invasion or revolution.

See CHEMISTRY; GERMANY and RUMANIA under History.

HURRICANES. During 1943 there were ten tropical hurricanes observed in the Atlantic Ocean north of the Equator and one on the west coast of Mexico. A description of each of these follows.

July 25-28. The hurricane that passed inland over the Bolivar Peninsula, on the upper Texas coast during the early afternoon on July 27, was the most severe storm experienced in the Galveston Bay area since the hurricane of Aug. 16-18, 1915. It was a storm of rather small area but unfortunately passed over the most densely populated and highly developed portion of the Texas coast.

Upper air indications of an approaching storm had been noticed as early as July 23, but no disturbed surface conditions were observed until July 25, when wind shifts from southeast to northeast at Burrwood, New Orleans, and Biloxi indicated a disturbance south of Burrwood. Within a few hours heavy seas were reported on Mississippi Sound. During the next two days the disturbance increased rapidly in intensity and, moving west-northwestward to the Texas coast, passed inland

over the Galveston Bay region, between noon and 1:00 p.m. July 27, as a small intense storm accompanied by full hurricane winds.

The Galveston Airport recorded a maximum wind velocity of 74 m.p.h. and the Houston Airport 85 m.p.h. Other maximum wind velocities were: Port Arthur, 54 m.p.h.; Ellington Field, 54 m.p.h.; and Houston City, 59 m.p.h. The calm center of the storm was felt over almost the entire length of the Bolivar Peninsula; its passage required about an hour. Since, at this point, the storm was moving 12 to 14 miles per hour the calm center or "eye" was about 12 to 14 miles across as it passed inland. The lowest pressure reported during the passage of this storm was 28.95 inches, recorded at both Galveston and Houston. Unusually heavy rainfall accompanied the storm. Damage was estimated at \$10,000,000 in the Galveston area, \$6,250,000 in the Houston area, and \$300,000 in the Port Arthur area, a total of \$16,550,000. Nineteen persons lost their lives.

August 13-19. A tropical disturbance of moderate intensity was first detected on August 13, near 17° N. and 60° W. Moving northwestward until the evening of the 17th, it then turned north and northeastward, passing about 200 miles east of Cape Hatteras. It lost its identity near 41° N. and 61° W.

August 20-26. This large and intense hurricane was first observed on August 20 in the area east of the Lesser Antilles. Moving in a parabolic course, it passed some distance west of Bermuda, joined with a storm that had moved off Labrador at about 51° N. and 42° W., intensified, and moved rapidly northeastward across the Atlantic and north of Scotland. Winds over 75 m.p.h. were reported at Bermuda, August 24, while the storm center was estimated to be 100-150 miles west of that Island, indicate the large area of hurricane winds that accompanied the storm. At 12 noon, August 24, Bermuda reported a barometer reading of 29.59 inches.

September 1-9. No previous charted history is available for a fully developed hurricane that appeared southeast of Bermuda on September 2. On the 3rd it passed about 125-150 miles east of Bermuda and then began to curve slowly northeastward. At this point, its progress was retarded for several days by a strong high pressure area, after which its course was changed to northwestward, then north, and later to northeastward as it moved into Newfoundland on September 9.

September 14-16. A disturbance developing at about latitude 30° N., longitude 72° W. was accompanied by gale winds as it moved northward and northeastward. It passed about 150 miles east of Cape Hatteras on the 14th, then moved by Nova Scotia, and reached Newfoundland on September 16.

September 15-19. During the night of September 16 a high pressure area, centered over the northern Plains States, blocked the north-northwestward progress of the storm and forced it into a loop which was completed during the 17th. Evidence suggests that this storm was of a violent nature and extended over a wide area during September 16-17. The disturbance, while still approximately 80 miles from the coast, caused a wind of 62 m.p.h. and a tide of 4.5 feet at Freeport, Tex. Galveston about 120 miles distant from the center reported a wind of 38 m.p.h. and Port Arthur about 180 miles removed experienced winds ranging as high as 47 m.p.h. The level of the water in Lake Ponchartrain exceeded all previous records. The lowest barometer reading along

the coast was 29.84 inches observed on September 16, at Freeport. The storm decreased rapidly in intensity during September 18-19. Heavy rains were responsible for most of the damage.

September 28-October 1. Forming southwest of Bermuda on the 28th, this storm developed gale winds as it moved northwestward and passed inland over the coasts of Maryland and Virginia on September 30. Cape Henry, Va., reported a maximum wind velocity of 56 m.p.h. The lowest pressure recorded at that station, 29.62 inches, was registered about 8:00 p.m. High tides with rain caused flooding of some streets in the downtown portion of Norfolk.

October 1-3. This disturbance was first noticed some distance southeast of Bermuda, and after passing slightly west of that Island on October 1-2, curved to the northeastward and lost its identity in the North Atlantic near 45° N. and 55° W.

October 11-17. A moderate disturbance that moved westward through the Windward Islands near Santa Lucia on the 11th, turned northward near longitude 68° W., passed through Mona Passage, accompanied by hurricane winds, and continued on an almost straight northerly course to the Atlantic coast, where it passed inland near the Maine-New Brunswick border with greatly decreased intensity.

October 21-22. During October 21 and 22 a tropical disturbance, of moderate gale force, moved through the western Caribbean south of Swan Island into the Gulf of Honduras, and dissipated near the east coast of Guatemala.

October 9. At 9:30 a.m. a tropical storm of considerable intensity struck the west coast of Mexico, passing inland a few miles south of the Port of Mazatlan, Sinaloa. The disturbance apparently formed in the area between the Revilla Gigedo Islands and the Marias Islands and moved rapidly northeastward to the coast where it destroyed the small towns of El Roble and Palmillas and partially destroyed Villa Union and the Port of Mazatlan. After passing inland it apparently dissipated upon reaching the mountain range near the coast. Barometric pressure at the Mazatlan Observatory began to fall at 1:30 a.m. on October 9, reaching a minimum of 28.31 inches about 8 hours later. An extremely rapid fall of .827 inch took place in 8 hours. A maximum wind velocity of 134 m.p.h. was reached about 9:30 a.m. This velocity was recorded for a period of 15 minutes ending when the anemometer was blown away. About 100 persons lost their lives. Property damage amounted to about \$4,500,000. See METEOROLOGY.

HURRICANES IN 1942

Because of the war no information on tropical hurricanes was released during 1942. A brief description is given below.

The hurricane which swept inland over the Matagorda Bay area of Texas during the early morning hours of Aug. 30, 1942, was one of the most severe storms on record for the Texas coast. Gales and hurricane winds prevailed over a path about 250 miles wide, with storm tides along the coast from the center northeastward to southwestern Louisiana.

This storm passed over the Windward Islands near Santa Lucia on August 21, attended by heavy squalls but with no indications of organized circulation. Moving rapidly westward through the central Caribbean Sea, the wave formation passed south of Jamaica during the night of the 24th, where its progress became slower and the first indications of development were noted. It passed

north of Swan Island as a moderate storm but with definite indications of rapidly increasing intensity, and crossed the tip of Yucatan Peninsula during the night of August 27, attended by full hurricane winds. Passing into the Gulf of Mexico, and moving northwestward in an almost straight line it reached the Texas coast, approximately two days later, as a severe storm attended by full hurricane winds over a path nearly 150 miles in width. Tides were extremely high near the path of the center and high tides extended well to the right of the center. The highest reported was 14.7 feet at Matagorda, Tex.

A disturbance developed over the extreme southeast Bahamas, turned southwestward, and, increasing to hurricane or near hurricane force, crossed the north coast of Cuba a short distance southeast of Cay Paredon Grande where on the 6th, a wind of 70 miles per hour was reported. The disturbance weakened somewhat as it crossed the mountainous region of Cuba, but still retained an active cyclonic circulation as it passed into the Caribbean. Moving southwestward it regained hurricane intensity and, on approaching the Yucatan Peninsula, turned westward and struck inland over British Honduras. The center emerged into the Bay of Campeche on the 9th. On the 10th its northwest movement was blocked by high pressure at the surface and aloft and, being forced back southeastward, it reentered Yucatan and dissipated on the 11th in the interior of the peninsula.

North of Belize severe damage was reported from a coastal area 100 miles long and 40 to 50 miles deep. The center passed inland near or over the small village of San Pedro which was 90 per cent destroyed. From Caye Corker came a report that a tidal wave had cut the island into three distinct parts, carrying away everything in its path. Damage throughout the affected area of British Honduras has been estimated at \$4,000,000.

RICHMOND T. ZOCH.

HURS. See *INDIA* under *History*.

HYDRAULIC ENGINEERING. See *GEOLOGICAL SURVEY*; *WATER SUPPLY*.

ICC. See *INTERSTATE COMMERCE COMMISSION*.

ICELAND. An island state in the North Atlantic, situated 200 miles east of Greenland and about 540 miles northwest of Scotland; occupied by Anglo-American forces since May 10, 1940, for the duration of World War II. Area, 39,709 square miles, only one-fourth of which is habitable. Population in 1941, 121,618 (excluding Anglo-American forces). Populations of the chief towns: Reykjavik (capital), 39,739; Akureyri, 5,357; Hafnarfjörður, 3,718; Vestmannaeyjar, 3,410. Elementary education is compulsory and there is virtually no illiteracy. Reykjavik has a university. Over 98 per cent of the people are members of the Evangelical Lutheran Church.

Production. Fishing is the chief industry; it supports nearly 30 per cent of the population directly and in 1942 it provided 96 per cent of the value of all exports. The fish catch totaled 335,157 metric tons in 1942, of which 88 per cent was exported to Great Britain. At the beginning of 1943, the fishing fleet consisted of 607 vessels totaling 26,627 gross tons, including 31 steam trawlers totaling 10,435 gross tons. About 36 per cent of the inhabitants live by agriculture, sheep raising, and dairy farming. Potatoes, turnips, and hay are the chief crops. There were 627,966 sheep and 39,867 cattle in 1940. There are few trees and only low-grade

coal deposits, but extensive peat deposits are used for fuel and many buildings in Reykjavik are heated by water from hot springs. Only about 25,000 horsepower of the 4,000,000 available from water power is utilized. The chief manufactures include fish, dairy, and other food products, foundry articles, leather, beverages, clothing, shoes, gloves, ship's equipment and stores, paint, furniture, etc.

Foreign Trade. Merchandise imports in 1942 were valued at 247,080,000 Icelandic crowns (129,577,000 in 1941); exports, 200,436,000 crowns (188,508,000 in 1941). The chief exports are fish, cod-liver oil, mutton, wool, sheepskins, horses, furs, and eider down. For the distribution of trade in 1941, see 1943 YEAR BOOK.

Finance. Budget estimates for 1942 placed revenue at 34,000,000 crowns and expenditure at 29,000,000 (18,478,173 and 18,016,263 crowns, respectively, in 1941). The national debt was 51,201,000 crowns on Dec. 31, 1941 (55,330,000 on Dec. 31, 1940). Official exchange rate of the crown (krona) in 1941 and 1942, 6.505 crowns equal 1 U.S. dollar, or 1 crown equals \$0.1537.

Transportation. There are no railways. In 1943 there were about 3,000 miles of highways. A fleet of small Icelandic merchant vessels provides shipping services to the United States and Great Britain. Coastal shipping and a local air line help to maintain communication between Iceland's chief towns. There are nearly 10,000 miles of telephone and telegraph lines and overseas communication by means of wireless telephone and submarine cables.

Government. The Constitution of May 18, 1920 (amended in 1934 and 1941) provided for a constitutional monarchy. The King of Denmark exercised executive power through a responsible Cabinet. Legislative power rests conjointly with the King and the Althing, the oldest parliament in the world, established 930 A.D. The Althing in 1943 consisted of 52 elected members. One-third of its members are elected to the upper chamber by the whole Althing; the other two-thirds form the lower chamber.

Iceland was acknowledged by the Act of Union of Nov. 30, 1918, to be an independent, sovereign state having a personal union with Denmark through a common king. This treaty expired in 1943. In 1938 the Althing voted to terminate the union with Denmark upon expiration of the treaty, and a popular referendum was to have been held on this issue during 1940. This program was interrupted by the German occupation of Denmark on Apr. 9, 1940. On April 10 the Althing authorized the Government temporarily to exercise the sovereign powers vested in King Christian X and to assume full charge of Iceland's foreign affairs, previously conducted by Denmark under the Act of Union. The Althing on May 16, 1941, adopted constitutional amendments (1) proclaiming Iceland's right to declare itself independent, (2) terminating the Act of Union upon its expiration in 1943, (3) providing for the election of a regent to exercise the King's functions temporarily, and (4) providing for the establishment of a constitutional republic as soon as union with Denmark was formally terminated. Sveinn Björnsson, former Icelandic Minister to Denmark, was elected regent on June 17, 1941, for one year. He was reelected in 1942 and 1943.

British troops occupied Iceland May 10, 1940, "to insure the security of Iceland against a German invasion" (see 1941 YEAR BOOK, p. 344). On invitation of the Iceland Government, and with the approval of the British, the U.S. Government on

July 1, 1941, assumed responsibility for the military protection of Iceland for the duration of the war (see 1942 YEAR BOOK, p. 269f.). British troops were all withdrawn during 1942. For 1943 developments, see below.

History. The Government during 1943 continued its efforts, which were only partially successful, to control the inflationary rise of wages and living costs caused by the presence of American forces, extensive work on new military, naval, and air installations, and other war conditions. Hundreds of Icelanders were working on U.S. Army projects. The fishing industry was booming as a result of the assured market in Britain provided by the U.S.-Icelandic lend-lease agreement of 1942. In December the United Press reported that there was not a single unemployed person in Reykjavik. A three-year trade agreement between Iceland and the United States was signed August 27 which was expected to facilitate an expansion of mutual commerce.

Long-range German planes made sporadic attacks upon towns and bases in Iceland and shipping in the adjoining waters during the year. On June 20 the Iceland Foreign Office protested a German attack on a native coastal vessel that killed two persons and wounded five. A four-engined German bomber was shot down off the north coast of Iceland by U.S. fighter pilots on August 5. Lieut. Gen. Frank M. Andrews, commander of all U.S. forces in the European theater of operations, and Bishop Adna Wright Leonard of the U.S. Methodist Church were killed with other occupants of their plane in a crash in Iceland on May 3. Appointment of the first Russian Ambassador to Iceland was announced in Moscow December 12.

ICE SHOWS. See **SKATING**.

IDAHO. A mountain State. Area: 83,557 sq. mi. Population: 524,873 (1940 census); 467,657 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. **AGRICULTURE**; **MINERAL PRODUCTION**; **ROADS AND STREETS**; **SCHOOLS**; **SOCIAL SECURITY BOARD**; **TAXATION**; **UNIVERSITIES**; and **VITAL STATISTICS**. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article **ELECTIONS IN THE UNITED STATES**; also, for incumbents, **HOUSE OF REPRESENTATIVES** and **SENATE**.

Legislation. See the separate article on **STATE LEGISLATION**.

Officers. The Governor is C. A. Bottolfson (Rep.), inaugurated in January, 1943, for his second two-year term; Lieutenant Governor, Edwin Nelson; Secretary of State, George H. Curtis; Attorney General, Bert H. Miller. See **ANTIMONY**; **DAMS**; **LEAD**; **SILVER**; **TUNGSTEN**.

ILLINOIS. An east north central State. Area: 56,400 sq. mi. Population: 7,897,241 (1940 census); 7,643,350 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. **AGRICULTURE**; **MINERAL PRODUCTION**; **ROADS AND STREETS**; **SCHOOLS**; **SOCIAL SECURITY BOARD**; **TAXATION**; **UNIVERSITIES**; and **VITAL STATISTICS**. The census of manufactures has been suspended for the time

being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article **ELECTIONS IN THE UNITED STATES**; also, for incumbents, **HOUSE OF REPRESENTATIVES** and **SENATE**.

Legislation. See the separate article on **STATE LEGISLATION**.

Officers. The Governor is Dwight H. Green (Rep.), inaugurated in January, 1941, for a four-year term; Lieutenant Governor, Hugh W. Cross; Secretary of State, Edward J. Hughes; Attorney General, George F. Barrett.

See **FLOODS**; **PRISONS** under *Prison Scandals*; **STATE LEGISLATION** under *State Government and Employees*.

ILLUMINATION. The only new types of lamps that were permitted to be manufactured during the year under WPB limitations were those developed for special military uses, and these cannot be discussed now. The all-glass sealed-beam automobile headlight lamp, which was developed prior to the war and which immediately found almost universal use on the American motor-car, has found enormously wide military applications. More than 30 types and styles of this very effective lamp have been developed for tanks and ordnance vehicles, signaling, spotlights and searchlights, airplane landing lights, and a variety of other critical uses where their simplicity of installation, minimum use of critical materials, precise optical control, and standard of candlepower maintenance were important and valuable factors.

The subject of miniature lamps ordinarily conjures thoughts of Christmas-tree or flashlight lamps, or perhaps an automobile tail-light. Currently, however, several types of miniature lamps unfamiliar to the public are in military service. Signaling devices, radios, telephones, and indicating devices of the U.S. Army Signal Corps require a hundred different designs. Sixty-eight different types are used on Navy vessels, and still others on the myriad airplanes of the U.S. Army Air Forces. Doctors and surgeons of the Medical Corps depend upon a group of highly specialized miniature lamps, many of them of the tiny "grain of wheat" size and variety that was one of the interesting novelties at the 1939-40 World's Fair.

Requirements of gunnery training devices, and visual education through the medium of motion pictures and training films, required a manufacturing output of motion picture projection lamps three times that of the previous peacetime high level of yearly production. The needs of high-speed photography were factors in the development of new types of flash-lamps and flash-tubes, some of which are capable of giving repeated intense flashes of one-millionth second duration. (See **PHOTOGRAPHY**.) Special lighting devices are typified by those developed for the inspection of gun bores, shell cases, and optical flats. In the normal commercial range of incandescent and fluorescent lamps, the enormous demand of America's 24-hour-a-day wartime industry kept all available production facilities busy, and brought some restrictions and standardizations in the sizes and varieties available to normal civilian customers.

Some new lines of incandescent searchlights were developed for various uses ranging from pilot-house mounting on shipboard to signaling use, for which purpose they were fitted with a Venetian-blind type of shutter. In output, these range up to ten million beam candlepower. A high intensity mercury-arc air-cooled searchlight, utilizing a 900-watt air-cooled high-pressure mercury lamp, and giving four

times the beam candlepower output of a comparably sized incandescent unit, was developed, principally for military uses. The counterpart of this searchlight, however, is used in connection with the U.S. Weather Bureau, designed to facilitate day or night determination of cloud ceilings and the rate at which they are lifting or lowering. The projector sends a narrow beam of light in a true vertical direction, and an associated "ceilometer" detects the returned light reflected from the cloud, indicating the angle from the vertical. The height of the cloud then is determined by simple triangulation.

Information released from laboratories during the year provides an interesting glimpse into future possibilities in the illumination field. These include: an electric heat lamp, which looks like a sealed-beam headlight but contains a 750-watt bulb and gives off heat enough to dry new paint on military vehicles in three minutes—enough heat to enable bacon and eggs to be cooked on it; sterilizing lamps, which will be so simple to use that they can be used in conjunction with toothbrush racks, shoe-trees, et cetera, to kill and control germs and fungi; shatter-proof light bulbs with extra strong filaments and lacquer coating that will stand dropping without breaking; a compact new sunlamp, combining the warming infra-red rays and the tanning ultra-violet rays, requiring no reflector and capable of being plugged into any electric outlet; a 10,000-watt mercury vapor lamp (water-cooled), the surface light intensity of which is rated as one-fifth the intensity of the sun's surface, which suggests itself for large halls and athletic fields. A demonstration display wherein commercial fluorescent lights, brilliantly lighted without any direct electrical connection, and while being carried around the room by individuals, gives rise again to thoughts of power by radio. The radio-frequency power for this demonstration was provided by a physician's ordinary diathermy set, the high-frequency emanations from which activated the fluorescent materials in the lamp. Although this demonstration admittedly was a stunt, and although electric power by wireless is still only a dream as far as any practical application is concerned, it is understood that the Federal Communications Commission already is planning to reserve part of the postwar radio spectrum for wireless heating and cooking for the future. See **ELECTRIC LIGHT AND POWER**.

G. ROSS HENNINGER.

IMMIGRATION, EMIGRATION, AND NATURALIZATION. The Immigration and Naturalization Service of the U.S. Department of Justice administers the Federal immigration and nationality laws.

Immigration and Emigration. During the fiscal year which ended June 30, 1943, 23,725 persons, comparatively few of whom had been here before, left their homes in foreign countries and were admitted to the United States for permanent residence. This represents a marked decrease from the number admitted for permanent residence during former years, which aggregated 28,781 in 1942, 51,776 in 1941, 70,756 in 1940, and 82,998 in 1939. Aliens admitted for temporary stay or after a brief sojourn abroad, chiefly visitors, persons in transit, and returning residents, totaled 81,117, a decrease of 1.6 per cent from the 82,457 admitted in 1942. While this does not include cruise passengers, travelers between Continental United States and outlying possessions, and persons habitually crossing and recrossing the international land boundaries, it is thus clear that the number of aliens being admitted into the United

IMMIGRANT ALIENS ADMITTED AND EMIGRANT ALIENS DEPARTED, FISCAL YEARS 1942 AND 1943, BY COUNTRIES OF LAST OR INTENDED FUTURE PERMANENT RESIDENCE

Countries	Immigrants 1942	1943	Emigrants 1942	1943
All countries.....	28,781	23,725	7,363	5,107
Europe.....	11,153	4,920	1,091	1,719
Albania.....	.....	.....	1	.....
Belgium.....	346	120	3	.....
Bulgaria.....	15	3	.....	.....
Czechoslovakia.....	137	102	.....	.....
Denmark.....	84	100	105	.....
Estonia.....	14	14	.....	.....
Finland.....	44	49	5	17
France.....	4,430	1,201	31	9
Germany (& Austria)...	2,150	248	2	.....
Great Britain:				
England.....	838	901	632	1,405
Scotland.....	51	71	64	47
Wales.....	18	2	2	10
Greece.....	174	229	6	1
Hungary.....	186	75	.....	.....
Ireland (Eire).....	70	132	18	10
Italy.....	103	49	21	3
Latvia.....	27	21	.....	.....
Lithuania.....	52	43	.....	.....
Netherlands.....	139	77	4	2
Northern Ireland.....	13	33	5	3
Norway.....	72	71	1	.....
Poland.....	343	394	.....	1
Portugal.....	437	395	56	100
Rumania.....	67	45	.....	23
Soviet Russia.....	60	32	17	23
Spain.....	234	254	50	25
Sweden.....	205	58	28	24
Switzerland.....	585	123	21	23
Yugoslavia.....	73	29	2	.....
Other Europe.....	186	49	8	16
Asia.....	564	334	817	12
China.....	179	65	135	4
Japan.....	44	20	618	.....
Palestine.....	150	107	7	1
Syria.....	24	9	.....	.....
Other Asia.....	167	133	57	7
Canada.....	10,450	9,571	595	439
Newfoundland.....	149	190	14	8
Mexico.....	2,378	4,172	2,889	2,498
West Indies.....	1,599	2,312	770	85
Central America.....	805	1,218	266	123
South America.....	989	693	737	224
Africa.....	473	141	67	26
Australia.....	100	97	16	3
New Zealand.....	20	23	12	8
Other countries.....	101	54	89	7

Note 1.—The number of immigrants given above as admitted include not only quota immigrants but nonquota immigrants, being wives of citizens, husbands who married citizen wives prior to July 1, 1932, children of citizens, etc. It will also be noted that this table is based on the country of last residence of the immigrant. These figures do not, therefore, agree accurately with the immigration quota figures because the quota under which any immigrant is admitted is that of the country of his birth, not that of the country of his last residence. Note 2.—Immigrants admitted from the "barred zone" of Asia are mainly persons of the white race.

States from abroad is relatively small. However, wartime conditions have made it imperative that the qualifications and credentials of all aliens coming to the United States be examined with even more thoroughness than heretofore.

The greatest volume of movement into and out of the United States takes place across the land borders. During fiscal year 1943 there were 40,717,372 of such entries (including each crossing of the border by any traveling alien or United States citizen), of which 20,378,438 were by aliens and 20,338,934 were by citizens. The total number of admissions of all classes into the United States, after inspection by officers of the U.S. Immigration and Naturalization Service was 41,848,384.

The admissions of aliens who commenced their permanent residence in the United States and the departures of aliens for permanent residence in other countries are shown in the accompanying table.

Quota immigration to the United States for 1943 was 9,045 as compared with 14,597 in 1942, a decrease of 5,552 or 38 per cent. The permissible annual quota for the year was 153,774.

but only one of the national quotas was filled, because of war conditions. The number of aliens debarred at ports of entry during 1943 was 1,495. Of these rejections 464 occurred on the Mexican Border, 880 on the Canadian Border, 45 at New York, 31 at New Orleans, and 75 at other seaports.

Repatriations and Deportations. The Immigration and Naturalization Service is authorized to remove to other countries at government expense aliens who have fallen into distress or need public aid from causes arising after their entry and who want to be so removed. During the year five aliens were returned to their native lands at their own request. During the fiscal year 4,207 aliens were deported under warrants of deportation and 11,947 deportable aliens were allowed to depart at their own expense without warrants of deportation. The total of enforced departures was 16,154, as compared with 10,613 during the previous year.

The principal classes of aliens deported under warrants were, in order, "entered without valid visa," "criminals," "previously debarred or deported," and "remained longer than authorized." Of those deported, 2,905 or 69 per cent were returned to Mexico, 464 or 11 per cent were returned to Canada, and 247 or 6 per cent to Great Britain.

The Border Patrol. Unsettled international conditions increase the responsibilities of the Border Patrol. The average size of the force of Border Patrol officers and employees of all grades of duty during the fiscal year 1943 was 1,400. During the fiscal year, officers patrolled 10,276,454 miles and questioned 24,598,186 persons. They apprehended 16,330 law violators, 63 of whom were smugglers of aliens, 11,175 illegal entrants, and 5,092 persons wanted for other law violations.

Aliens and Alien Registration. Under the Alien Registration Act of 1940 (see YEAR BOOK for 1940), the Immigration and Naturalization Service was required to register and fingerprint, through post offices, all aliens in the United States, except foreign government officials and members of their families. At the end of the fiscal year 1943 there were 4,593,537 aliens, exclusive of alien seamen, registered with the Service. See FEDERAL BUREAU OF INVESTIGATION.

Naturalization. The year 1943 was marked by increased naturalization activity. There were 317,508 aliens naturalized during the year, an increase of 17.4 per cent over 1942 and of 109.1 per cent as compared with the average for the years 1931 to 1940. In the fiscal year 1943, 115,664 declarations of intention were filed, the lowest number since 1934, and just 52 per cent of the number filed in 1942. Petitions for naturalization aggregated 375,700, and 318,933 certificates of naturalization were issued.

Aliens admitted to citizenship during 1943 formerly owed allegiance to the following countries: British Empire, 93,827; Italy, 36,118; Poland, 42,077; Germany, 17,774; Soviet Russia, 25,444; Czechoslovakia, 12,979; Sweden, 9,448; Hungary, 4,792; Yugoslavia, 8,471; Greece, 6,938; all other countries, 59,640.

An abbreviated judicial naturalization process was provided by Title X of the Second War Powers Act, approved Mar. 27, 1942, for those non-citizens serving in the armed forces of the United States who are residing within the jurisdiction of a naturalization court and an administrative naturalization process for those serving abroad with the armed forces. During the fiscal year ended June 30, 1943, 36,049 members of the military

and naval forces were admitted to citizenship on the basis of petitions filed under section 701 of the Nationality Act of 1940 (Title X, Second War Powers Act). Of this total 35,416 were granted citizenship while residing in continental United States or Alaska, 586 while on duty in Hawaii, and 47 during service in Puerto Rico or the Virgin Islands of the United States.

In addition a total of 1,425 persons serving abroad with the armed forces of the United States were admitted to citizenship under the administrative naturalization procedure authorized by Section 702 of the Nationality Act of 1940. Naturalization was granted in such cases by designated representatives of the Immigration and Naturalization Service.

Alien Enemies. Under the Nationality Act of 1940 alien enemies include natives, citizens, denizens, and subjects of the countries against whom the United States has declared war. At present these countries are Japan, Germany, Italy, Hungary, Rumania, and Bulgaria. By authority of Presidential Proclamations of Dec. 7 and 8, 1941, and Jan. 14, 1942, a series of regulations was promulgated by the Department of Justice affecting the conduct of citizens or subjects of Japan, Germany, and Italy, fourteen years or older. On Oct. 12, 1942, aliens of Italian nationality, except those already interned or under parole, were excepted from the regulations for alien enemies by order of the Attorney General.

Although citizens or subjects of enemy countries other than Germany and Japan are not required to observe any of the regulations prescribed for alien enemies, they are subject to arrest and detention as "alien enemies" if, at any time, the apprehension of any of them is deemed necessary to maintain national security.

Alien enemies considered potentially dangerous may be interned for the duration of the war, by order of the Attorney General, in internment camps which are operated by the Immigration and Naturalization Service. At the end of the fiscal year, 9,220 alien enemies were in the custody of the Service, of whom 5,988 were from the continental United States or Puerto Rico, 2,349 from Latin America, and 883 from Alaska, Hawaii, and other Pacific islands. Sixteen detention stations were in operation at the end of the year. One of the internment camps, at Crystal City, Texas, is used solely for the internment of families of enemy nationalities and at the end of the fiscal year 1,282 individuals were interned there, consisting of 367 men, 358 women, and 557 children.

During the fiscal year 5,323 aliens were apprehended under Presidential warrants of arrests. Of this number 2,311 were paroled upon formal orders of the Attorney General, including 979 Japanese, 895 Germans, 434 Italians, and 3 of miscellaneous nationality; and 266 Japanese, 294 Germans, 170 Italians, and 12 of miscellaneous nationality were unconditionally released. Those paroled were required to make regular reports to civilian sponsors and to district parole officers of the Immigration and Naturalization Service, who conducted periodic investigations in each such case.

The law permits the naturalization of aliens of enemy nationality under prescribed safeguards. A thorough investigation is conducted in connection with each petition for naturalization filed by an alien enemy, and only those cases in which the loyalty of the petitioner is established without question are recommended to the courts for favorable action.

New Legislation. During the last year several important laws affecting aliens were considered by Congress. The most important of these was the enactment of legislation repealing the Chinese Exclusion laws, which had been on the statute books for 61 years. The new legislation, approved Dec. 17, 1943, also removed the previously established bars against naturalization of persons of the Chinese race as American citizens, and established an annual immigration quota permitting admission of approximately 105 Chinese into the United States.

The following laws were also enacted during the past year: The Act of July 13, 1943, which authorized the deportation of an alien, under certain conditions, to the country where his recognized government-in-exile is located, or to a country proximate to the one of which he is a citizen or subject, or, with the consent of the country of which he is a citizen or subject, to any other country; the Act of Apr. 29, 1943, which permitted the entry of native-born agricultural workers from any country of the Western Hemisphere under certain exemptions and conditions; the Act of Dec. 8, 1942, which, under certain conditions, extends the exemptions which make it possible for persons living abroad to retain their United States citizenship. Affected by this Act are husbands, wives, or children under 21 years of age, residing abroad for the purpose of being with a spouse or parent, who is an American citizen by birth. See FEDERAL BUREAU OF INVESTIGATION; PALESTINE under *History*.

EARL G. HARRISON.

IMPORTS. See TRADE, FOREIGN and the topics there listed. For *Office of Imports*, see ECONOMIC WARFARE, OFFICE OF. For *Import Revenues*, see CUSTOMS. **INCENTIVE PLAN.** See NATIONAL WAR LABOR BOARD.

INCOMES, INCOME TAXES. See LIVING COSTS; PUBLIC FINANCE; TAXATION. For *National Income*, see BUSINESS REVIEW; FINANCIAL REVIEW. Compare LABOR CONDITIONS under *Wages*.

INDIA. A dependency of the British Empire, consisting of British India, or the territories subject to British law, and the Indian States, ruled by native princes but under the indirect control of the British Parliament. Capital, New Delhi. Summer seat of government (April to October), Simla.

Area and Population. The area and population of India at the censuses of 1931 and of Mar. 1, 1941, are shown in the accompanying table, by British Provinces and Indian States and Agencies. The areas are those for 1941 and show a number of changes from the 1931 census. For purposes of comparison, population figures of the 1931 census have been adjusted to conform with the 1941 territorial arrangements.

The total 1941 census population was made up of 201,025,726 males and 187,972,229 females. The population increased by 50,878,801, or 15 per cent, between 1931 and 1941 as compared with a 10.6 per cent increase between 1921 and 1931. The largest percentage increases in the British Provinces during 1931-41 were: Delhi, 44.3; Northwest Frontier Province, 25.3; Punjab, 20.5; and Bengal, 20.3; and in the States and Agencies: Punjab, 22.4; Travancore, 19.1; and Cochin and Rajputana, 18.1 each. Calcutta, with a population of 2,108,891 in 1941 (excluding suburbs) showed an increase of 945,120, or nearly 85 per cent, for the decade. Populations of the other chief cities in 1941, with 1931 figures in

AREA AND POPULATION OF INDIA

Provinces	Area, sq. mi.	Population	
		1931	1941
Madras.....	126,166	44,205,243	49,341,810
Bombay.....	76,443	17,992,053	20,849,840
Bengal.....	77,442	50,115,548	60,306,525
United Provinces.....	106,247	48,408,482	55,020,617
Punjab.....	99,089	23,580,864	28,418,819
Bihar.....	69,745	32,367,909	36,340,151
Central Provinces & Berar.....	98,575	15,323,058	16,813,584
Assam.....	54,951	8,622,791	10,204,733
North-West Frontier Province.....	14,263	2,425,076	3,038,067
Orissa.....	32,198	8,025,671	8,728,544
Sind.....	48,136	3,887,070	4,535,008
Ajmer-Merwara.....	2,400	506,964	583,693
Andamans & Nicobars.....	3,143	29,463	33,768
Baluchistan.....	54,456	463,508	501,631
Coorg.....	1,593	163,327	168,726
Delhi.....	574	636,246	917,938
Panth-Piploda.....	25	4,545	5,267
Total.....	865,446	256,757,818	295,808,722
<i>States and Agencies</i>			
Assam.....	12,408	625,606	725,655
Baluchistan.....	79,546	405,109	356,204
Baroda.....	8,236	2,448,283	2,855,010
Bengal.....	9,408	1,862,939	2,144,829
Central India.....	52,047	6,643,761	7,506,427
Chattisgarh.....	37,687	3,548,338	4,050,000
Cochin.....	1,493	1,205,016	1,422,875
Deccan & Kolhapur.....	10,870	2,457,971	2,785,428
Gujarat.....	7,352	1,265,078	1,458,702
Gwalior.....	26,008	3,523,070	4,006,159
Hyderabad.....	82,313	14,436,148	16,338,534
Kashmir & Feudatories	82,258	3,646,243	4,021,616
Kashmir.....	69,903	3,581,699	3,945,090
Madras.....	1,602	453,495	498,754
Mysore.....	29,458	6,557,302	7,329,140
North-West Frontier Province.....	24,986	2,259,288	2,377,599
Orissa.....	18,151	2,683,472	3,023,731
Punjab.....	38,146	4,496,928	5,503,554
Punjab Hill.....	11,375	989,833	1,090,644
Rajputana.....	132,559	11,570,583	13,670,208
Sikkim.....	2,745	109,808	121,520
Travancore.....	7,662	5,095,973	6,070,018
United Provinces.....	1,760	856,497	928,470
Western India.....	37,894	4,220,595	4,904,156
Total.....	715,964	81,361,336	93,189,233
Total India.....	1,581,410	338,119,154	388,997,955

parentheses, were: Bombay, 1,489,883 (1,161,383); Madras, 777,481 (647,230); Hyderabad, 739,159 (466,894); Lahore, 671,659 (429,747); Ahmedabad, 591,267 (310,000); Delhi, 521,849 (347,539); Cawnpore, 487,324 (243,755); Amritsar, 391,010 (264,840); Lucknow, 387,177 (274,659).

The rural population in 1941 was 339,301,902, or 87.2 per cent of the total; urban population, 49,696,053, or 12.8 per cent. The rural population lived in 655,892 villages. In all India the birth rate per thousand inhabitants increased from 31.3 in 1931 to 34.1 in 1938, while the death rate fell from 24.9 to 24.3.

Education and Religion. The number of literate persons increased from 28,138,856 at the 1931 census to 47,322,700 in 1941; of the latter, 37,016,200 were in the British Provinces and 10,306,500 in the States and Agencies. Of the total population of India, 12.2 per cent were literate in 1941 as against 6.9 per cent in 1931. The 1941 male population was 18 per cent literate; female, 5. Literacy in British India increased from 7.1 per cent in 1931 to 12.5 per cent in 1941; in the States and Agencies, from 6.6 to 11.1 per cent. Of the Provinces, Bombay showed the highest 1941 literacy rate with 19.5 per cent. Among the States, Travancore had a literacy rate of 47.7 per cent; Cochin, 35.4; Baroda, 23.0.

There were in British India in 1940-41 a total of 213,927 "recognized" educational institutions with 15,179,323 pupils, and 18,862 "unrecognized"

or indigenous institutions with 590,567 pupils. Institutions for general education included 15 universities with 12,622 students, 325 arts and science colleges with 114,104 students, 14,711 secondary schools with 2,754,239 pupils, and 187,164 primary schools with 11,797,849 pupils. For special education there were 85 professional colleges with 26,236 students, 612 training schools with 31,331 pupils, and 11,015 special schools with 442,942 pupils. Educational expenditures for recognized institutions in 1940-41 were 298,403,205 rupees.

Following is the division of the 1941 population according to the principal religious communities: Hindus, 254,930,506, including 48,813,180 members of the depressed classes; Moslems, 92,058,096; tribal communities, 25,441,489, predominantly Hindus, with only 7,630,000 professing tribal religions; Christians, 6,316,549; Sikhs, 5,691,447; Jains, 1,449,286; Parsees, 114,890; Buddhists, 232,003; Jews, 22,480.

Production. Agriculture is the main support of the population. Recent yields of the principal crops for all India were: Rice (estimated), 24,533,000 tons in 1942-43; cotton, 4,454,000 bales (of 400 lb.) in 1942-43; wheat, 10,070,000 metric tons in 1941-42; sugar cane, about 4,431,840 short tons in 1941-42; tea (estimated), 555,000,000 lb. in 1942-43 (export quota for 1943-44, 421,567,207 lb.); jute, 5,474,015 bales (of 400 lb.) in 1941-42 for India and Nepal; linseed, 432,000 tons in 1940-41; rapeseed and mustard, 1,094,000 tons in 1940-41; sesamum, 433,000 tons in 1940-41; castor seed, 105,000 tons in 1940-41; groundnuts, 3,702,000 tons in 1940-41; rubber, 35,530,400 lb. in 1940-41; corn, 2,196,000 tons in 1940-41; barley, 2,263,000 tons in 1940-41; tobacco, 468,000 tons in 1940-41. The output of sugar in 1941-42 was 871,472 short tons; of molasses, 328,048 short tons. The 1942 lac yield was 213,000 maunds (of 82.28 lb.). India has nearly one-third of the world's cattle population. The 1940 livestock census for British India (exclusive of United Provinces and Orissa) showed 87,674,765 cattle, 22,415,493 buffaloes, 25,183,062 sheep, 30,212,044 goats, 1,000,965 horses and ponies, 40,270 mules, 1,157,459 donkeys, and 428,563 camels. The wool clip averages about 86,000,000 lb. annually. Timber production increased from 242,000 tons in 1940-41 to 396,000 tons in 1941-42.

Mineral and metallurgical production was (metric tons): Crude petroleum, 325,000 in 1940; coal (British Provinces), 26,496,000 in 1940; manganese ore (metal content), 430,000 in 1939; iron ore (metal content), 1,994,000 in 1939; steel ingots and castings, 1,365,000 in 1940; pig iron, 2,000,000 in 1940; copper (smelter), 6,800 in 1939; chrome ore (metal content), 25,000 in 1939. Gold output (1941) was about 285,162 fine oz. The principal manufacturing industries are cotton spinning and weaving, the milling of jute and rice, sugar refining, iron and steel smelting and fabrication, cotton ginning and pressing, railway and tramway workshops, general engineering. Production of arms, munitions, and military supplies rapidly expanded after the outbreak of the World War in 1939. More than 30,000 men were employed in naval shipbuilding and repair yards in April, 1942. In 1943 there were estimated to be more than 11,000 industrial enterprises in operation, employing over 2,000,000 persons.

Foreign Trade. For the year ended Mar. 31, 1942, imports were equivalent to \$519,900,000 (\$470,910,000 in 1941-42) and exports of Indian merchandise to \$711,660,000 (\$560,700,000 in 1940-41). Exports of foreign merchandise were \$45,-

990,000 in 1941-42 and \$35,430,000 in 1940-41. The chief 1941-42 import items were: Vehicles, \$18,660,000; raw cotton, \$17,730,000; food and tobacco, \$12,090,000; machinery, \$5,700,000; non-ferrous metals, \$3,990,000; oils, \$2,460,000. Leading exports: Cotton manufactures, \$58,740,000; tea, \$34,470,000; jute goods, \$25,170,000; grain and pulse, \$13,530,000; gums and resins, \$8,790,000; raw jute, \$7,890,000; raw hides and skins, \$4,920,000; and wool, \$2,880,000. The United Kingdom took 32.5 per cent of India's 1941-42 exports and supplied 21 per cent of the imports. The rest of the British Empire took 26 per cent of the exports and furnished nearly 40 per cent of the imports; United States, 20 per cent of both exports and imports.

Finance. Preliminary budget estimates for the fiscal year ended Mar. 31, 1944, placed expenditures of the Central Government at 2,595,900,000 rupees (1,828,100,000 for defense and 767,800,000 for civil needs). On the basis of existing taxation, revenue for 1943-44 was estimated at 1,993,000,000 rupees. Revised budget estimates for 1942-43: Revenues, 1,787,600,000 rupees; expenditures, 2,734,200,000. Finally revised closed accounts for 1941-42: Revenues, 1,737,000,000; expenditures, 1,863,900,000.

The estimated interest-bearing obligations of the Government of India totaled 12,471 million rupees (about \$389,107,680 at the average 1942 exchange rate) on Mar. 31, 1942. The sterling debt, which at the outbreak of World War II was equivalent to \$1,440,000,000, was reduced to \$264,000,000 on Jan. 5, 1943, and was expected to decline to \$49,000,000 by the end of 1943. Meanwhile India's sterling securities and cash had increased from a prewar figure of \$323,000,000 to \$1,148,000,000. Thus the war had changed India from a debtor to a creditor country. This change was due mainly to the agreement of 1939 under which the British Government undertook to meet all expenses of Indian troops sent outside of India's borders, including equipment and supplies sent from India for their use. This expense amounted to \$160,000,000 in 1940-41 and \$1,160,000,000 in 1942-43. Average exchange value of the rupee: \$0.3014 in 1941 and \$0.3012 in 1942.

Transportation. India in 1943 had 41,000 miles of railway lines, of which 33,000 were directly owned and managed by the Central Government and about 7,131 miles by the Indian States. The Government on Jan. 1, 1943, took over two private railway systems, with 2,344 miles of line. Operating statistics of the State railways for 1941-42, with 1940-41 figures in parentheses, were: Passengers, 623,100,000 (575,700,000); freight, 96,997,000 tons (92,780,000); gross traffic receipts, 1,351,700,000 rupees (1,175,800,000); net surplus, 280,800,000 rupees, of which 201,700,000 rupees were placed to the credit of the general revenues of the Central Government. Military traffic in 1943-44 was estimated at 15,000,000 tons compared with 500,000 tons in peacetime.

Highways in the British Provinces extended 319,131 miles in 1940. Air transportation was provided by local air systems and by the British and Dutch international trunk lines. The principal ports are Bombay, Calcutta, Karachi, and Madras. In 1938-39 a total of 7,440 vessels of 19,091,691 tons entered and cleared with cargoes at ports in the British Provinces.

Government. The King of Great Britain and Northern Ireland also bears the title of Emperor of India. The Constitution, known as the Government of India Act, 1935, provided for an Indian

federation and provincial autonomy. Provincial autonomy went into effect Apr. 1, 1937, when elective legislative assemblies with responsible ministries were established in the 11 Governors' Provinces under direct British rule. In October–November, 1939, the All-India Congress ministries in seven of the 11 provinces resigned and on Nov. 5, 1939, the Governor General utilized his emergency powers to restore all governing powers in these provinces to the appointive British governors (see 1939 YEAR BOOK, p. 360). Parliamentary government was retained in the other four provinces and on Nov. 24, 1941, was restored in one additional province.

The federation scheme provided for the union under a central government of the 11 Governors' Provinces and the 584 Native States ruled by Princes owing suzerainty to the British Crown. For different and often contradictory reasons federation was opposed by most of the politically vocal elements in India (see preceding YEAR BOOKS). Following the outbreak of World War II, the Governor General announced Sept. 11, 1939, that no further steps toward federation would be taken until peace was concluded.

In the meantime executive powers were concentrated in the hands of the Governor General, or Viceroy, who is appointed by the Crown, usually for five years, and assisted by an appointive Executive Council, composed of 15 high officials (in 1943, 10 Indians and 4 British with one post vacant) responsible for the various administrative departments. The Governor General also holds the separate office of Crown Representative (established Apr. 1, 1937) through which he performs the functions of the Crown in relation to the Native States. Pending the federation of the Governors' Provinces and Native States, the Governor General remained under the direction of the Secretary of State for India in the British Cabinet, and the Central Legislature of British India, established in 1921, continued in existence. The Legislature consisted of a Council of State of 34 elected and 26 nominated members (serving five years) and a Legislative Assembly of 105 elected and 40 nominated members (serving three years). The Central Legislature's actions are not binding on the Governor General and his Cabinet.

The All-India Congress, the most powerful Indian political party, captured 57 of the 102 elective seats in the Legislative Assembly in the 1934 elections. Due to delay in putting the federation scheme into effect, the Governor General extended the life of the 1934 Legislative Assembly by successive acts. Governor General and Crown Representative, Field Marshal Sir Archibald P. Wavell, who was appointed June 18, 1943, to succeed the Marquess of Linlithgow. For political and other developments during 1943, see below.

HISTORY

Political Deadlock Unbroken. The main political development of 1943 was the continuance of the deadlock between the British authorities, the All-India Congress, the Moslem League, and other communal minorities over the issue of the form and extent of the next step toward Indian self-government (see preceding YEAR BOOKS for background of this involved controversy).

The deadlock had been tightened in 1942 through the rejection of the Cripps proposals by all Indian factions and the failure of the All-India Congress's "non-violent" revolt against British rule, instigated and led by Gandhi. Gandhi's civil disobedience campaign, launched when Britain's war

crisis was most acute and when a Japanese invasion seemed imminent, had largely evaporated by the beginning of 1943. Yet Gandhi refused British demands that he call it off. The British, in turn, declined to release the All-India Congress leaders and other participants in the revolt until they formally renounced the civil disobedience resolution of Aug. 8, 1942. According to New Delhi authorities, a total of 8,120 persons were detained in connection with the uprising.

Gandhi's Fast. In an effort to force the British to release him and his Congress associates, Gandhi on February 10 began a three-weeks' hunger strike, during which he subsisted on citrus fruit juice mixed with water. The fast quickly centered the world's attention upon the frail 73-year-old leader of the independence movement. It was widely feared that the fast would cause his death, and Herbert L. Matthews, *New York Times* correspondent in India, predicted that his death would provoke "a profound emotional upheaval that will almost certainly take violent form." As the fast continued, appeals for Gandhi's release came from many sources in India and the other United Nations.

The Government of India stood firmly upon the position taken by the Viceroy in an exchange of letters with Gandhi before the latter began his hunger strike. The Viceroy offered to release Gandhi from his place of confinement in the palace of the Aga Khan at Poona for the duration of the fast, but declared that the Government "had no intention . . . of allowing the fast to deflect their policy" and would accept no responsibility for the consequences to Gandhi's health. Gandhi insisted that only unconditional release, without any renunciation on his part of the civil disobedience movement, would induce him to abandon his fast.

On February 22 the Government of India issued a White Paper charging Gandhi with responsibility for the revolutionary disturbances of the previous autumn. Two days later Prime Minister Churchill, rejecting an appeal for Gandhi's release from a committee of prominent Indian liberals, upheld the Viceroy's policy. When Gandhi ended his fast on March 3, at the end of the allotted three weeks, the special privileges accorded him by the Government during the ordeal were withdrawn. He returned once more to the status of an ordinary political prisoner. Apparently his fast served to deepen the breach between Congress sympathizers and the British authorities. It led to the resignation on February 17 of three Indian members of the Viceroy's Council, but they were replaced on May 2, leaving the Council with 10 Indian and four British members. Tactically, the fast was an admitted failure. It left the Government stronger and the Congress Party weaker than before.

Efforts at Compromise. Throughout the remainder of the year various groups in India and abroad made repeated efforts to break the deadlock and bring about a renewal of the political negotiations interrupted by the Congress Party's civil disobedience resolution. But Gandhi and his followers refused to annul the resolution, and the Viceroy, supported by the Churchill Government, declined to permit the imprisoned Congress leaders to receive visitors and carry on political negotiations so long as they endorsed civil disobedience. British authorities reiterated that the Cripps offer of Indian self-government was still open if the Indian factions wished to avail themselves of it.

The Federal Court at New Delhi on April 22 declared invalid the defense regulation under

which the Congress leaders were held without trial. This placed the Government in a dilemma, which the Viceroy ended on April 28 with a decree permitting the arrest and detention without trial of persons deemed likely to interfere with the prosecution of the war or to cause other trouble in wartime. Habeas corpus petitions challenging the new ordinance were dismissed by Bombay's High Court on May 8 and by the Federal Court at New Delhi on August 31. However the latter court strongly condemned the methods of enforcement of the ordinance employed in Bengal. Meanwhile a limited number of the imprisoned Congress members had been released by provincial authorities.

Holding rigidly to the policy adopted toward the imprisoned Congress leaders in 1942, the Viceroy in April rejected a request from William Phillips, President Roosevelt's special envoy to India, to see Gandhi and Pandit Jawaharlal Nehru. He also on May 27 denied Gandhi's request for facilities to communicate by letter with Mohammed Ali Jinnah, leader of the Moslem league, who had challenged the Hindu leader to initiate negotiations, if he was sincere in wishing to end the disagreement between the Congress Party and the Moslem League. The uncompromising attitude displayed by both the Government and Gandhi profoundly discouraged those Indians working for a compromise settlement that would align all Indian factions actively with the cause of the United Nations against the Axis powers. On August 9, anniversary of Gandhi's arrest, there were minor disorders in Bombay, Ahmedabad, and Poona by followers demanding his release.

Growth of Pakistan Idea. Meanwhile Jinnah's demand for an autonomous Moslem state (Pakistan) was steadily gaining support among India's 90 million Moslems. While the All-India Congress leaders languished in jail and their supporters clung to non-cooperation with the British, the Moslem League gained control of additional provincial governments. In May a Ministry under Moslem League auspices was formed for the first time in the Northwest Frontier province, giving the League control of five of the 11 provinces of British India which were granted autonomy under the 1935 Constitution. In the other six provinces the boycott by the All-India Congress left power exclusively in the hands of the British Governors.

At the annual Moslem League convention at New Delhi in April Jinnah accused the All-India Congress of obstructing Indian unity and independence by its refusal to concede Pakistan. Attacking the Government for its "shabby treatment of Moslem India and the Moslem League," he offered to help the war effort in return for a promise of Pakistan. A resolution passed by the conference warned the Government that if it attempted to impose a federal constitution upon India, strife and bloodshed would result. At another conference attended by 50,000 Moslem League delegates in Karachi in December, Jinnah charged that the British Government had rejected his offer of Moslem cooperation in winning the war because of his demand for Pakistan and a share in India's government.

Hur Chief Executed. The Government's determination to take a firmer and more aggressive line in dealing with Indian problems was indicated by various other developments. On March 20 the Pir of Pagara, leader of the fanatical Moslem Hur sect in Sind Province, was executed. He had been convicted by a court-martial of conspiring with his followers to "wage war against the King-Emperor"

by wholesale killings, brigandage, and sabotage during 1941 and 1942. Martial law in the Hur country, proclaimed in the spring of 1942, was abolished on June 1.

Fischer's Writings Censored. An order issued under the Defense of India regulations on June 5 required that the writings on India by Louis Fischer, American author and correspondent, must be submitted to censorship before publication in India. The Home member of the Viceroy's Executive Council explained to the Legislative Assembly at New Delhi August 3 that Fischer's writings and speeches on India were considered of a prejudicial and inaccurate nature calculated to cause disaffection against the Government and to harm relations between the United Nations. On the other hand British officials joined with liberal Hindus in seeking to press a bill for the further emancipation of Hindu women through the Central Legislature.

Small States Amalgamated. The long toleration by the British Raj of administrative inefficiency and other abuses in some of the smaller Indian States appeared to have ended. Steps were taken to amalgamate small States with some of the larger native States to improve standards of administrative efficiency notwithstanding the protests of the small States' rulers. However this program struck a legal snag on December 9 when a special New Delhi court ruled that Britain lacked authority over the officers of a State.

Wavell Named Viceroy. Announcement of the appointment of Field Marshal Sir Archibald P. Wavell, British commander-in-chief in India, to succeed Lord Linlithgow as Viceroy was made in London June 18. Sir Archibald, after being raised to the peerage, was sworn in at New Delhi October 20 as the 19th British Viceroy and Governor-General. He was replaced as commander-in-chief in India by Gen. Sir Claude J. E. Auchinleck. The latter was relieved of responsibility for the conduct of operations against Japan through the appointment late in August of Adm. Lord Louis Mountbatten as head of the new Allied East Asia Command.

Lord Linlithgow was installed as Viceroy in April, 1936, to place in operation the far-reaching constitutional reforms of 1935, which he had helped to frame as chairman of the Joint Select Committee of Parliament entrusted with that task. He instituted the system of provincial autonomy in British India but his efforts to establish the Indian federation provided for in the Constitution were blocked by the opposition and factional bickering of the Indian Princes, the All-India Congress, and other political and communal groups until the outbreak of the World War interrupted the application of the program of constitutional reform. Before concluding his unprecedentedly long term of 7½ years, Lord Linlithgow in a farewell address before the Legislative Assembly on August 8 declared that only Indians themselves could remove the obstacles blocking solution of the Indian political problem. "Lack of trust and lack of readiness to accept the legitimate claims of minorities stand in the way," he declared, urging Indian leaders to get together without delay to end the political deadlock.

The appointment of Field Marshal Wavell, generally criticized by Indian nationalists, was taken as an indication that the British Government believed military considerations of paramount importance and contemplated no fundamental change in the political situation in India until after the defeat of Japan. When Wavell was sworn in, Lord Mountbatten was already at work preparing to



Above: Field Marshal Viscount Wavell, the newly appointed Viceroy of India, confers with staff officers of an advanced military post on the Burma frontier. (British Information Services)



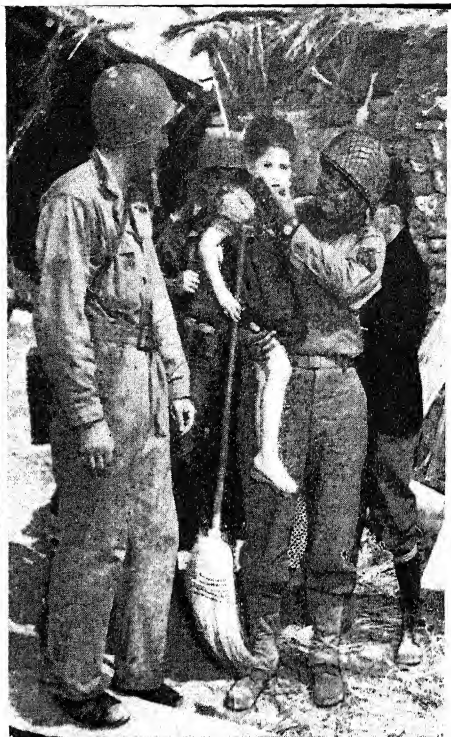
INDIA IN TRIBULATION

Famine ravaged Bengal and other food-importing areas. Deaths mounted to an estimated total of 100,000 weekly. In the center picture, British R.A.F. personnel deprive themselves to share their rations with women and children near their station. (I.N.P.)



I.N.P.

The signing of an Italian armistice was without ceremony among ranking British, American, and Italian representatives. At right: American Coast Guardsmen make friends near the beach at Paestum. (U.S. Coast Guard Photo.)



I.N.P.

A COURTROOM SCENE UNDER THE ALLIED MILITARY GOVERNMENT (AMG)

Such courts handle cases involving Allied interests. Violations of Italian law are heard before Italian courts.

use the large Allied forces built up in India and Ceylon for the reconquest of Burma and British Malaya.

The Famine. The new Viceroy assumed office as one of the worst famines in 70 years was ravaging Bengal Province and other food-importing areas of India. A food shortage developed early in the year mainly as a result of general price and monetary inflation, which stimulated hoarding and speculating in food grains. As the months passed the food crisis was accentuated by the decline in Bengal's rice crop from the normal 9,000,000 to 7,000,000 tons as a result of the cyclone and tidal wave of October, 1942; the loss of India's normal import of 1,500,000 tons of rice from Burma; the use of Indian-produced food to feed Indian armed forces at home and abroad and to sustain thousands of refugees from Burma; the shortage of transport facilities; the unwillingness of provincial governments with surplus grain supplies to make part of them available to Bengal and other deficit areas; and the partial failure of the Central Government to increase food production, curb speculation and profiteering, and force an equitable distribution of existing grain stocks. Another important contributing factor was the tremendous growth of the Indian population during the preceding decades (see above under *Area and Population*).

The famine struck Bengal in earnest in August, and steadily worsened. By the end of October deaths from starvation in that province alone were unofficially estimated at 100,000 weekly. Half a dozen other provinces in east and south India, with a total population of some 100,000,000 were affected, though not so seriously as Bengal. There thousands of hungry peasants crowded into the teeming metropolis of Calcutta only to die on the streets or in overcrowded hospitals. There were reports of food riots and of the spread of cholera and other epidemics in the wake of the famine.

On October 13 the Government of India decided to take control of the food situation away from the provincial governments, wherever necessary, and to stop further exports of grain. Immediately after his installation as the new Viceroy, Viscount Wavell made a three-day tour of the famine districts in Bengal and initiated more vigorous relief measures. The Indian Army was called upon to establish rest camps in the suburban areas of Calcutta, where food and medical attention was given destitute persons until they were able to return to their villages. An Indian Army supply officer was lent to the Indian Government to improve the distribution of food. Army equipment and resources were utilized for the movement of food stores, provision of shelter and medical aid, etc. Deliveries of food to starvation districts of Bengal were soon doubled.

By December 18 the Secretary of the India Food Department was able to report that both the famine and the acute food shortage had ended in Bengal. Meanwhile the Central Government on December 13 succeeded in imposing rationing and the control of food prices in the Punjab, the major food-producing area of India. In his first major speech as Viceroy delivered December 21 in Calcutta, Viscount Wavell indicated his intention to postpone action on India's political problem in order to concentrate on the war, an increase in food production, and reconstruction measures.

New Bengal Governor. An unfortunate aspect of the Bengal famine was its adverse effect upon Allied military preparations in northeast India for the invasion of Burma. The need of a more energetic and efficient administrator in this crucial

area was filled December 24 with the appointment to the Governorship of Bengal of Richard Gardiner Casey, former Australian Ambassador to Washington, who had been serving since mid-1942 as British Minister of State in the Middle East with War Cabinet rank.

War Preparations. While limited military and air operations continued along the Burmese-Indian frontier (see BURMA under *History*; WORLD WAR), work progressed steadily during 1943 on the bases and installations needed for the coming Allied offensive. Indian, British, and Chinese armies and Anglo-American air forces were built up and trained for the grim work ahead (see CHINA under *History* for the role of the Chinese forces in India). Many new airdromes, camps, roads, a gasoline pipeline, and communications systems were constructed, including a huge U.S. Army bomber base. The Indian Army by 1943 had well over 1,200,000 enlisted men serving at home and over 250,000 overseas. The British Government, under an agreement signed in 1939, bore the cost of defense installations in India and of maintaining Indian forces outside of India. U.S. lend-lease aid delivered to India during the two years ended in March, 1943, totaled \$295,501,494.

Japanese air raids on Calcutta and other Indian cities were suspended early in 1943 after inflicting total civilian casualties of 816 killed and 878 wounded. On December 5 Japanese bombers reappeared in their first daylight raid on Calcutta, in which 334 civilians were killed and a lesser number injured.

Indian Puppet Regime. The Japanese meanwhile continued their propaganda broadcasts designed to stir rebellion, sabotage, and non-cooperation with the British among the Indian peoples. As a part of this propaganda offensive the Japanese radio on June 19 announced the arrival in Tokyo of Subhas Chandra Bose, former president of the All-India National Congress, who escaped to Berlin following his arrest for violating wartime regulations in India in 1940. (The 1942 report that Bose had been killed in an airplane crash was apparently erroneous.) Early in July Tokyo announced that Bose had been elected leader of "The Indian Independence League" at a meeting in Singapore and had organized an "Indian national army of liberation."

These moves were followed on October 20 by a Tokyo announcement that Bose had set up a "provisional government of India" in Singapore, and that the puppet government's first act would be to declare war on Britain and the United States. On November 7 the Japanese said they had granted control of the Japanese-occupied Andaman and Nicobar Islands in the Bay of Bengal to Bose's "provisional government." Representatives of the Bose regime attended a conference of "leading representatives of the Axis powers" in Tokyo on November 16, according to Japanese broadcasts. The Government of India at New Delhi announced October 6 the execution of four Indian civilian residents of Malaya, who were caught after being landed in India from a Japanese submarine and convicted of accepting Japanese money to carry out traitorous activities. Also see JAPAN under *History*.

Dispute with South Africa. Despite the urgency of internal and war problems, the Government and press of India devoted much attention and protest to the extension by the Parliament of the Union of South Africa of restrictive and discriminatory legislation against the Indian population of Transvaal and Natal provinces. This legislation, designed

to check Indian economic penetration in those provinces, was denounced in India as "repugnant, unnecessary, and inopportune."

See CHINA, GREAT BRITAIN and TIBET under *History*; BIRTH CONTROL; BRIDGES; BUSINESS REVIEW; CHEMISTRY under *Foreign*; COTTON; FINANCIAL REVIEW under *International Finance*; LABOR CONDITIONS under *Labor Movements*; LEND-LEASE PROGRAM; NAVAL PROGRESS; WORLD WAR.

RONALD STUART KAIN.

INDIANA. An east north central State. Area: 36,291 sq. mi. Population: 3,427,796 (1940 census); 3,406,257 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Henry F. Schricker (Dem.), inaugurated in January, 1941, for a four-year term; Lieutenant Governor, Charles M. Dawson; Secretary of State, Rue J. Alexander; Attorney General, James M. Emmert. See FLOODS.

INDIAN AFFAIRS, Office of. A branch of the U.S. Department of the Interior which has the management of all Indian affairs and of all matters arising out of Indian relations. It is responsible for upkeep on about 200 Indian reservations and supervises the education of 36,000 Indian children. Commissioner of Indian Affairs in 1943: John Collier.

INDO-CHINA. The southeastern peninsula of Asia, consisting of Burma, Federated Malay States, French Indo-China, Straits Settlements, Thailand, and the Unfederated Malay States. See BRITISH MALAYA; BURMA; FRENCH INDO-CHINA; THAILAND.

INDUCTION ACCELERATOR. See PHYSICS under *Hundred Million Volt X-Rays*; also ELECTRICAL INDUSTRIES.

INDUCTION CENTERS. See SELECTIVE SERVICE SYSTEM.

INDUSTRIAL PROTECTION COUNCIL. See CIVILIAN DEFENSE, OFFICE OF.

INDUSTRIAL TRAINING. See VOCATIONAL TRAINING. **INDUSTRY.** See the topics listed under BUSINESS REVIEW and WAR PRODUCTION.

INFANT MORTALITY. See CHILDREN'S BUREAU; VITAL STATISTICS.

INFANTRY DIVISIONS. See MILITARY PROGRESS.

INFLATION. See BANKS AND BANKING; PUBLIC FINANCE; RAILWAYS; UNITED STATES under *Inflation*; BOLIVIA, BRAZIL, CHILE, CHINA, COLOMBIA, EGYPT, JAPAN, MEXICO, PERU, and the other belligerent countries, under *History*.

ININI. See under FRENCH GUIANA.

INLAND WATERWAYS CORPORATION. See WATERWAYS, INLAND.

IN-MIGRATION. See NATIONAL HOUSING AGENCY.

INNER MONGOLIA. See CHINA; MONGOLIA.

INSECTICIDES. See CHEMISTRY; INSECT PESTS.

INSECT PESTS AND PLANT QUARANTINES. Entomologists throughout the country have coordinated their efforts to meet the many vital problems brought about by the war. Cooperative projects with the military establishment have done much to alleviate diseases that are spread by insects. The work on control of insects that affect the food and fiber crops has been intensified. Orderly distribution of insecticide materials also needed in other military production has been aided by detailed surveys of insect abundance. New materials of less restricted availability have been and are being developed as substitutes for the more critical insecticides.

Mosquitoes. Mosquitoes are the most unbearable insects in many areas where troops are concentrated, but, far more important than the annoyance they cause, these insects are the only known carriers of such dread diseases as yellow fever and malaria. The use of an aerosol bomb containing insecticides under pressure which when released atomizes these as a fine mist, promptly rids any room or other enclosure of pestiferous insects. Three good mosquito repellents and a new anopheline larvicide that gives promise of greater value than any previously known have been discovered. In strongly saline water with heavy vegetation, 30 gallons of fuel oil per acre controlled the breeding of salt-marsh mosquitoes. Under similar conditions 100 gallons of newly developed fresh-water oil emulsion per acre gave 86 per cent control and 150 gallons gave 97 per cent control in four hours.

Body Lice. Body lice, or cooties, are the bane of the soldier's existence, but here again the transmission of typhus fever and several other diseases overshadows their annoyance. Investigations on the fumigation of body lice in clothing and equipment conducted for the Army resulted in the adoption of vault fumigation for delousing large quantities of clothing and individual bag fumigation for small quantities. Effective louse powders for individual use and means of louse-proofing soldiers' clothing have been developed.

Cattle Grubs. Cattle grubs reduce the meat supply and destroy the leather so sorely needed to keep the Army on its feet. A saving of 25 per cent or more on ground derris or cube root for use on cattle grubs has been effected when dusts were employed by using pyrophyllite or tripoli earth as diluents instead of talc or sulfur. The two former diluents carry the rotenone dust down into the hair of the heavy-coated animals of Wyoming and Montana, but the talc and sulfur do not.

Screwworm. An extensive outbreak of the screwworm occurred in 1943. From two points of heavy infestation, southern Texas and Florida, the insect spread until by the end of the season it occurred from the southeastern corner of South Carolina to the Pacific and as far north as Iowa, Illinois, and Indiana. The new remedy, Smear 62, was very effective in control.

Stablefly. The stablefly reduces milk supply and materially reduces meat production, as well as being a vicious biter of man. Studies in connection with the stablefly demonstrated that in some areas the grass deposited on the beaches by the tides stimulated intensive egg-laying only when fermented. Treatment of the grasses with creosote oil and salt water was effective in killing the immature stages. This remedy was used on an extensive scale to protect military personnel along the coast. One of the mosquito repellents was effective in protecting dogs and horses from these flies.

Hessian Fly. The hessian fly destroys an average of over seventeen million bushels of wheat annually. Infestations of the hessian fly at harvest time in

1943 were low generally; however, there were menacing populations in local areas throughout the winter-wheat belt. As a result of cooperative work of the Bureau of Entomology and Plant Quarantine with the Bureau of Plant Industry, Soils, and Agricultural Engineering, and the California Agricultural Experiment Station, club-types of wheat considerably resistant to the attack of the hessian fly were released to California growers in 1942. Other varieties of wheat possessing resistance to diseases as well as to the hessian fly, are soon to be ready for use in Kansas and Indiana.

European Corn Borer. The European corn borer was more abundant and destructive in 1943 than in any year since its introduction into the country. It was found to have extended its range to the west and northwest to include northeastern Missouri, east-central Iowa, and southeastern Minnesota. Commercial-scale trials of derris spray and of dual-fixed nicotine dust reduced infestation on sweet corn and increased the yield netting a profit of \$400 per acre.

Grasshoppers and Mormon Crickets. Damage by grasshoppers in 1943 continued in its downward trend. The adult survey conducted by the Bureau of Entomology and Plant Quarantine and cooperating States showed a build-up of populations in northeastern Washington and Oregon and from eastern Montana through the Dakotas into east-central Nebraska. There are also threatening populations in western Kansas and eastern Colorado. Damage by the Mormon cricket was in general less than last year. Threatening populations, however, were disclosed by the adult survey in northeastern Nevada, northeastern Idaho, north-central Wyoming, and northwestern Colorado. The use of cottonseed hulls and sawdust with mill-run bran as substitutes for more expensive material gave satisfactory results. The use of steam-rolled wheat and low-grade flour were found as effective as high-priced bran for use in bait.

White-fringed Beetle. Infestations were discovered in 1943 in four additional counties in North Carolina, and in localities near known infestations in Alabama, Florida, Louisiana, and Mississippi. More efficient methods of fumigation and cultural and cropping practices conducive to reduction of populations have been developed. Improvements in spray machinery and nursery barriers and the development of an airplane hopper for insecticide distribution have advanced the progress of control work.

Stored-grain Insects. Even before the war, stored-grain insects and other stored-product insects destroyed an average of over \$300,000,000 worth of materials already harvested and stored. The procedure of fumigation when first placed in storage, and periodical fumigations, protects the grain from insect damage. Experiments with hydrocyanic acid, methyl bromide, and other commonly recommended fumigants, applied in standard concentrations, indicated that none was harmful to the vitamin B₁ (Thiamin chloride) in enriched flour; methyl bromide, chloropicrin, and carbon disulfide, when applied in ordinarily recommended concentrations materially reduced the germination of wheat having a moisture content of over 12 per cent. A general fumigation of flour mills followed by fumigation of conveyors every three weeks and weekly removal of stock from elevator boots kept insect populations down.

Black-stem Rust. This disease during the past 28 years has resulted in an average loss of 36 million bushels of wheat. In areas in Pennsylvania where barberries have been kept suppressed, normal yields

of grain have been produced annually, while in the barberry-infested areas local outbreaks of stem rust of wheat and the accompanying crop failures continue to occur.

Codling Moth. Codling moth annually destroys an average of nineteen million bushels of apples. The codling moth caused more injury than usual in 1943 over most of the eastern part of the country. Heavy populations entered hibernation. It was found that phenothiazine could be substituted for lead arsenate in early cover sprays, and in the Pacific Northwest improved stickers resulted in control by the use of one-half the amount of phenothiazine that had been used previously.

Oriental Fruit Moth. Following its discovery for the first time in southern California in the fall of 1942, a cooperative Federal and State survey in the western half of the country was made in 1943. The survey disclosed newly infested areas extending from northeastern Texas through Oklahoma, eastern and east-central Kansas, and southeastern Nebraska into southern Iowa.

Japanese Beetle. The Japanese beetle infestation in the older infested areas continued generally low, whereas in the comparatively newly infested territory around the edge it was very heavy. No important spread of infestation was noted in 1943. The milky disease which has been cultured and distributed in certain areas continued to give control of the grubs. The development of two new methods of treating nursery stock was of special importance: one, the use of ethylene dichloride dip for the treatment of plants with root masses or soil balls, and the other, the treatment of growing nursery stock in the field with a dilute solution of methyl bromide. Two new treating schedules, providing for lower temperatures with methyl bromide fumigation of potted plants, were authorized.

Western Bark Beetles. Bark beetles destroy on an average five billion board feet of lumber annually. There was a marked decrease in the amount of timber destroyed by western bark beetles in 1942 compared with previous years. The reduction was due to increased efforts to control incipient outbreaks and to build up resistance of forests as well as to natural causes. Trees intended as camouflage for army camps were injured when the camps were being erected, resulting in bark beetle and borer attack. Army officials were instructed on tree-maintenance rules and large numbers of trees were saved.

Ambrosia Beetles. Owing to the scarcity of high-grade Sitka spruce suitable for airplanes, it is important that damage to the sapwood by ambrosia beetles be prevented. Studies were made on the period of time within which logs must be removed from the woods to avoid attack and the maximum allowable before serious damage results.

Gypsy Moth. Defoliation by the gypsy moth was the lowest recorded since 1924. Populations were reduced by the cold weather of 1942-43, when most of the eggs above the snow line were killed. Methyl bromide fumigation as a basis for certification of some classes of restricted articles was introduced for the first time.

Dutch Elm Disease. First-record infections of the Dutch elm disease were reported from 44 localities, 9 of which were in Connecticut, 1 in New Jersey, 7 in New York, 4 in Massachusetts, 17 in Pennsylvania, 5 in Ohio, and 1 in West Virginia. Women scouts were used for the first time in this work; they were employed in the Wilkes-Barre, Pa., district.

White Pine Blister Rust. White pines infected with white pine blister rust were found for the first time

in one county in Wisconsin and in three counties in Michigan, and Ribes infection was reported for the first time in one county in Minnesota and 11 counties in Iowa. These localities are within the area where the disease has been found on its alternate hosts, currants and gooseberries. There was no important extension in 1942 of the area where the disease is known to occur.

Truck Crop and Garden Insects. Recent research shows that a dinitro compound may be substituted for pyrethrum in the control of the potato leafhopper on potato and beans, and that basic copper arsenate is as effective, on the basis of laboratory or small-scale tests, as calcium arsenate against the tomato fruitworm, the Mexican bean beetle, and the Colorado potato beetle. The new materials, phthalonitrile and 2-fluorylamine, proved to be the most promising substitutes for lead arsenate in the control of the tobacco flea beetle and the hornworms. A nicotine-rotenone-sulfur combination, with the rotenone content reduced, was effective in controlling the pea aphid. Experiments with carriers and diluents show that pyrophyllite increases the efficiency of rotenone dust mixtures and that in general the talcs are superior to the clays. Work in Maine has shown that aphid infestation can be greatly reduced by rotenone-soybean oil and nicotine-rotenone sprays.

Boll Weevil. Cotton is our basic fiber crop; in an average year the boll weevil destroys the equivalent of 1,800,000 bales of cotton. In the summer of 1943 boll weevil activity was checked by weather in Texas, Oklahoma, and Arkansas, and damage was much less than anticipated. Infestation in the Southeastern States was about normal.

Bollworm and Cotton Leafworm. Considerable infestation by the cotton leafworm occurred in Texas, Oklahoma, Missouri, Louisiana, Mississippi, and Alabama. Injury by the bollworm in 1943 over the Gulf region was light, with heavy local damage in Texas and Georgia and also in Arizona.

Pink Bollworm. Infestation by pink bollworm was found during the course of 1943 to occur in certain counties of the Gulf coast of Texas and southwestern Louisiana. At the invitation of the Mexican Government, the Bureau of Entomology and Plant Quarantine established headquarters in Mexico in order that the cooperative work between the two countries on the pink bollworm may be more effective.

Bee Culture. In the studies of resistance of honeybees to American foulbrood, 575 queens of experimental stock were reared, of which 270 were distributed to State agencies for testing and observation. Considerable increase in the number of colonies without disease has been shown by two lines of stock now in the fifth generation.

Insect Identification. Service activities directly associated with the war included identification of many lots of insect material from military sources and personal instruction to officers of the Army, Navy, and Public Health Service in identification and classification of mosquitoes and other insects affecting human health. Data on disease-carrying insects from the countries bordering on the Mediterranean, Australia, New Zealand, and the South Pacific Islands was furnished to the Office of the Surgeon General, War Department.

Foreign Parasite Introduction. This work has been limited to the introduction of parasites from South America, especially Brazil, Argentina, and Peru. Forty-one consignments were forwarded to the United States and 13 to Puerto Rico. Arrangements were made for the importation of *Plaesus javanus* Erichson from Fiji, a consignment of adults being

forwarded to Honduras for release against stem-feeding grubs. Cooperative work with the Mexican Department of Agriculture was conducted on the biological control of the citrus blackfly on the west coast of that country. An effective parasite, *Eretmocerus serius* Silv., originally imported from Malaya, was sent from the Canal Zone.

Insecticide Investigations. The search for possible domestic sources of rotenone has been continued. Studies were continued on synergists for pyrethrum and three piperonylamides and piperine were found to be useful against house flies and five materials were found that increased the effectiveness of pyrethrum dusts against leaf-feeding beetles.

Foreign Plant Quarantines. More than 13,000 airplanes from foreign countries were inspected upon arrival, an increase of 51 per cent, and of this number 3,219 were found to carry prohibited plant material. The use of ballast consisting in part of surface soil by vessels arriving at Atlantic ports presented a problem of pest introduction. Other complications resulting from the war included the discharge of cargoes at ports in areas where such landing is ordinarily not permitted.

Mexican Border Service. There was a 26 per cent increase in the number of freight cars from Mexico inspected. In order to meet the requirements of entry needed to safeguard against pest risk, it was necessary to fumigate approximately one-fifth of the number inspected, an increase of about 200 per cent over last year. Nearly five million other vehicles and more than 350,000 pieces of baggage were examined through cooperation with the customs officials.

P. N. ANNAND.

INSULAR EMERGENCY COUNCIL. See PUERTO RICO under *History*.

INSULATION. See ASBESTOS; TALC.

INSURANCE. The year 1942 brought to the insurance world problems which were the direct result of America's change from peace to war. From a managerial and underwriting angle, 1943 simply accentuated these problems. Personnel problems became more acute because of the loss of married men with families, many having been in the more important executive positions. Administration costs increased materially. And for the first time in many years, companies found themselves competing with war plants in their desire to hold valuable employees and in hiring new employees. Taxation attained a sizeable share of each premium dollar. Investment problems were difficult; they were of greater seriousness than claims, although the latter gave the companies concern from the personnel angle, for it is here that the companies have what is sometimes their only direct contact with the policy holder. Outside of the life insurance field, there was a great tendency to reduce the cost of insurance or broaden the coverage.

"A little group of serious thinkers" started a movement toward the entry of the Government into the insurance field. In this regard, Kenneth Spencer, executive head of the Royal-Liverpool Group of Casualty Companies said: "The American voter does not prefer bureaucratic service and will not sanction such interference with private business unless he cannot obtain what he wants elsewhere or believes he is being unfairly treated or overcharged. He is willing to pay a profit for good wares or good service." The cynical may attribute this move in the direction of Government insurance as the reason for increased interest by

the insurance group in 1943 in the subject of Public Relations.

The War Damage Corporation (see RECONSTRUCTION FINANCE CORPORATION) completed its first year of operation on July 1, 1943, and announced that it had insured more than \$124,000,000 of property values against the possibility of enemy attack. Total premiums received in its first year amounted to \$130,000,000 against which claims amounted to \$63,000,000—the result of damage in the Philippines and at Pearl Harbor. All other claims amounted to less than \$100,000. Renewals were not materially affected by the general feeling that we would not see air attacks in this country, the bulk of the policies being renewed.

Life Insurance. The record for 1943 is a tribute to the public's confidence in life insurance companies as well as a tribute to the reduced force of field men and women directly responsible for the sale of insurance. The record is almost fantastic for it must be remembered that the ranks of prospects were also depleted by the large number of individuals who entered military and naval service. In spite of these reductions, there was a general increase in new life insurance sales, the chief reasons being (a) expanded sale of group life insurance; (b) pension trust sales; (c) more "retirement income" sales to men and women; (d) more business life insurance sold; (e) the possibility of inflation being indicated by the upward swing in the cost of living, and the realization on the part of the public that larger amounts of life insurance will probably be needed.

In 1943, citizens purchased from U.S. legal reserve companies approximately \$12,700,000,000 of new paid-for life insurance, not including policy revivals, increases and dividend additions. This is 5 per cent above the 1942 volume of \$12,097,000,000. At the end of 1943, life policies owned by 68,000,000 Americans totaled \$139,000,000,000 of insurance, nearly 7 per cent greater than the amount outstanding at the end of 1942. Payments and credits to policy holders and beneficiaries by all companies during the year reached an estimated total of \$2,400,000,000. Of this amount approximately \$1,100,000,000 or 46 per cent was disbursed to beneficiaries of deceased policy holders and about \$1,300,000,000 to living policy holders as matured endowments, annuities, surrender values, dividends, and disability benefits. Annual volume of these disbursements in the last ten years has averaged about \$2,500,000,000.

The investment of life insurance funds is of cardinal importance in the effectiveness of life insurance service. Of admitted assets, now estimated at \$37,675,000,000, \$12,600,000,000 has been loaned the Federal Government, \$2,250,000,000 has been invested in Government bonds, and \$10,775,000,000 has been invested in corporate securities of enterprises such as railroads, power, steel, petroleum, water, tires, etc. About \$6,450,000,000 is invested in real estate mortgages or business, industrial, or residential properties. Only 6 per cent of the assets represented policy loans, and 9 per cent represented real estate, cash, and collateral loans.

Marine Insurance. With the reduction of U-boat activity and consequent reduced losses, there was a lowering of rates generally. Due to the maintenance of an efficient ocean patrol, the rates have shown far less fluctuation than heretofore. See SHIPPING.

Fire Insurance. There was an increase of fire losses in 1943 (see FIRE PROTECTION) and a tend-

ency to broaden coverage generally, witness the extension of policies covering household property while elsewhere or while temporarily at other locations, with limits as to amount, but without extra premium charges for the clause. Quite a few States streamlined and simplified the fire policies, providing great economy of text and obviating the necessity of special clauses and riders.

Suretyship. With the continuation through 1943 of a manpower shortage throughout business generally, firms sought the protection afforded by the broad fidelity policies now available. There was a general increase in solicitation of this type of insurance, and hence the 1943 totals show a marked increase in premium volume, in spite of the reduced rates at which these bonds are written today.

Casualty. During 1943, a strong tendency was displayed, upon the part of all companies, to broaden and generally liberalize the policies on the market. Some of these changes will be mentioned here. Also, in anticipation of a brisk post-war market for insurance, many companies have made plans to enter new fields. Some of these plans have already become realities, as is evidenced by the action of Fidelity & Deposit Company of Maryland, which heretofore wrote only Surety, Plate Glass, and Burglary and which now writes Comprehensive Liability coverage. It is felt that this Company's unexpected entry into the liability field, shows the handwriting on the wall.

Early in the year, the Comprehensive Personal Liability policy was announced, including all hazards formerly embraced in residence, golf, sports, and personal liability policies. All personal activities of the insured and his family, including place of residence and covering away from the premises, golf, dogs, saddle animals, and excluding automobiles, are covered.

The Non-Occupational Accident Policy was announced, for the benefit of all workers, whether or not in jobs carrying great hazards. This insurance is naturally written at greatly reduced rates, since the problem of occupational accident frequency does not enter.

Workmen's Compensation business was a major premium producer in 1943 and production reflected the increased payrolls of industrial plants engaged in war work. Most industrial accidents showed an upward trend. In this field, too, there was a new development in the new "Disease Endorsement for Compensation Policies." Heretofore these policies did not cover the legal liability for sickness of employees unless caused by accident. Sickness may now be included for a premium charge of one cent per \$100 of payroll for the low limits of liability and higher limits for a small additional premium.

Automobile insurance was naturally "off." The drop in registrations (see MOTOR VEHICLES) had its reflection in car insurance, and accounts for the drop in premium income on Collision, Liability, and Property Damage totals for the year.

A new residence and "outside theft" policy was issued in April, 1943, granting insurance "away from the premises" and broadening generally some of the more restrictive clauses. In most localities there was no increase in the premium, although in some metropolitan centers, an additional \$5 charge was made per year. As the result of this new feature, the demand for burglary insurance increased toward the end of the year. And, as was to be expected, all companies were experiencing a marked increase in the number of claims, although most of the claims falling under

the "outside theft" section, were small in amount. The anticipated change in Personal Effects Floaters resulting from the new "Outside Theft" clause in burglary policies occurred. Underwriters felt that the burglary men were intruding. As a result, a rider was introduced for insertion in Personal Effects Floaters, which granted a 50 per cent reduction in the rate if the policy owner agreed that no claim would be made for any type of loss actually covered under other policies of insurance.

Finally, and in general, insurance companies in all fields are satisfied with the year just passed. With reduced clerical personnel, with accentuated investment problems, but more particularly, with reduced number of producers, the anticipated poor showing in all fields did not materialize. The general feeling on the part of most company executives was one of great satisfaction that the war had not harmed the industry more severely.

For governmental insurance activities, see FEDERAL DEPOSIT INSURANCE CORPORATION; NATIONAL HOUSING AGENCY; RECONSTRUCTION FINANCE CORPORATION; SOCIAL SECURITY BOARD; and (especially for National Service Life Insurance) VETERANS' ADMINISTRATION.

MERVIN L. LANE.

INTELLIGENCE SERVICES. See FEDERAL BUREAU OF INVESTIGATION; FEDERAL COMMUNICATIONS COMMISSION.

INTER-AMERICAN ACTIVITIES, CONFERENCES, ORGANIZATIONS. See COORDINATOR OF INTER-AMERICAN AFFAIRS; PAN AMERICANISM; PAN AMERICAN UNION; also, EDUCATION, U.S. OFFICE OF; Latin American Countries under *History*; INTERNATIONAL LABOR ORGANIZATION; METEOROLOGY; SMITHSONIAN INSTITUTION.

INTER-AMERICAN DEFENSE BOARD. An autonomous organization under the auspices of the Pan American Union (q.v.) established in accordance with Resolution 39 of the Meeting of Foreign Ministers of Rio de Janeiro in January, 1942, to study and to recommend to their governments the measures necessary for the defense of the western hemisphere.

Maj. Gen. Blanton Winship is Coordinator and Col. Lawrence Higgins is Secretary General of the Board.

INTER-AMERICAN HIGHWAY. See COSTA RICA, EL SALVADOR, GUATEMALA, HONDURAS, NICARAGUA, PANAMA, under *Transportation and History*; PAN AMERICANISM.

INTER-AMERICAN UNIVERSITY. See COORDINATOR OF INTER-AMERICAN AFFAIRS; EDUCATION.

INTEREST RATES. See BANKS AND BANKING.

INTERIOR, U.S. Department of. A Department of the U.S. Government which in 1943 consisted of the following principal branches:

- General Land Office
- Bureau of Reclamation
- Geological Survey (q.v.)
- Grazing Service
- Bureau of Mines (q.v.)
- Office of Indian Affairs
- National Park Service (see NATIONAL PARKS)
- Fish and Wildlife Service (q.v.)
- Office of Fishery Coordination
- Petroleum Conservation Division
- Solid Fuels Administration for War

- Division of Power
- Division of Territories and Island Possessions
- Puerto Rico Reconstruction Administration
- Office of Land Utilization
- Bituminous Coal Division
- Office of the Solicitor
- Office of the Chief Clerk
- Division of Information
- U.S. Board on Geographical Names
- Bonneville Power Administration
- Division of Personnel Supervision and Management
- Division of Classification

Secretary of the Interior in 1943: Harold L. Ickes. Under Secretary, Abe Fortas. The Office of the Petroleum Coordinator for War was abolished by Executive order on Dec. 2, 1942, and its functions were transferred to a new independent agency, the Petroleum Administration for War (q.v.).

INTERNAL REVENUE, Bureau of. A division of the U.S. Department of the Treasury, created in 1862, which supervises the determination, assessment, and collection of all internal revenue taxes and enforces the internal revenue laws. In addition it is charged with the administration of certain salary increases or decreases under the President's salary stabilization order. Major divisions are the Income Tax Unit, the Alcohol Tax Unit, the Miscellaneous Tax Unit, the Accounts and Collections Unit, and the Field Service. Commissioner in 1943: Guy T. Helvering.

INTERNATIONAL CLEARING UNION. See POSTWAR PLANNING under *International*.

INTERNATIONAL LABOR ORGANIZATION (ILO). The International Labor Organization is an association of nations which seeks by international action the improvement of conditions of labor, the raising of living standards, and the furtherance of economic and social stability. Its membership in 1943 comprised the following countries: Abyssinia, Afghanistan, United States of America, Argentine Republic, Australia, Belgium, Bolivia, Brazil, Bulgaria, Canada, Chile, China, Colombia, Costa Rica, Cuba, Czechoslovakia, Denmark, Dominican Republic, Ecuador, Egypt, Finland, France, Great Britain, Greece, Haiti, Hungary, India, Iran, Iraq, Ireland, Liberia, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Panama, Peru, Poland, Union of South Africa, Sweden, Switzerland, Turkey, Uruguay, Venezuela, Yugoslavia. The membership status of certain other countries is doubtful. For organization, see 1943 YEAR BOOK. The United States Government representative, Mr. Carter Goodrich, is Chairman of the Governing Body, while a United States employer, Mr. Henry I. Harriman, and a United States worker, Mr. Robert J. Watt, are members representing their respective groups.

The Governing Body has delegated to an Emergency Committee (selected from among its members) its duties in case wartime conditions prevent it from holding regular meetings. Although the official seat of the Office remains in Geneva, Switzerland, working headquarters have been situated since the autumn of 1940 at 3480 University Street, Montreal, Canada. In agreement with the Canadian Government and at the invitation of McGill University, an important part of the staff is established there under Mr. Edward J. Phelan, the Acting Director. A network of branch offices and national correspondents is maintained. The Branch Office in the United States is situated at 734 Jackson Place, Washington, D.C.

In October-November, 1941, a Conference of the Organization was held in New York City, attended

by delegations from thirty-four Member States, which gave the Organization a mandate to continue and intensify its wartime activities and to begin at once the study of (1) "measures of reconstruction," and (2) "emergency measures to deal with unemployment," and to direct its program of work so that it would be in a position to "give authoritative expression to the social objectives confided to it."

The work of the Organization in 1943 continued to be directed toward putting into effect this enlarged mandate. Integrated in its program were its normal constitutional activities, its work on wartime problems, and its study of postwar questions. Its activities have included the holding of meetings on particular subjects; the furnishing of advice to a number of governments in connection with the development of social insurance legislation, housing policy, labor relations, improvement and standardization of labor statistics, development of labor supply policy, and the formulation of national reconstruction programs; and the publication of a series of research studies, as well as a full series of periodical and special publications.

The series of tripartite meetings between the United States and Canada, which was begun in 1941, was continued during 1943, with a view to assisting both countries in the formulation of their labor supply policies. In July, 1943, authors of social security plans and social security administrators from a number of American countries and Great Britain met in Montreal at the invitation of the Office. During this consultation, a number of members and supporters of the Inter-American Committee on Social Security met and outlined a series of recommendations to the Committee, which was established in 1942 and which works in concert with the International Labor Office. At a meeting of the Office's Governing Body in December, it was decided to convene the next session of the International Labor Conference on Apr. 20, 1944, in the United States.

During the year the Office complied with numerous requests from Governments for expert advice. Typical of this form of service was the appointment of an official to assist the Joint Bolivian-United States Commission which investigated labor conditions in the Bolivian mines. At the request of the National War Labor Board of Canada, the Office submitted a brief during the Board's inquiry into labor relations. An official of the Office assisted the Mexican Government in the formulation of measures to apply that country's new social insurance legislation. In the field of social insurance the Office complied with requests which were received from the Governments of Chile, Costa Rica, Ecuador, Venezuela, and Paraguay.

The research and publications program of the Office during 1943 was directed toward meeting both its wartime and postwar responsibilities. The *International Labor Review*, which was increased in size in 1942, continued to be published monthly in English, French, and Spanish. The *Industrial Safety Survey*, the *Legislative Series* and the *Co-operative Bulletin* appeared regularly, as did the *Yearbook of Labor Statistics*. The record of the proceedings of the Twelfth Session of the Joint Maritime Commission was published under the title of *Merchant Seamen and the War*. Studies of special interest published during the year include *The Displacement of Population in Europe*, *The International Standardization of Labor Statistics*, and also *Intergovernmental Commodity Control Agreements*.

See LABOR CONDITIONS under *Employment*; LEAGUE OF NATIONS.

INTERNMENT. See IMMIGRATION; LAW under *War Decisions*.

INTERSTATE COMMERCE. See LAW under *Decisions Concerning the Federal System*.

INTERSTATE COMMERCE COMMISSION (ICC). An independent establishment of the U.S. Government empowered to regulate, in the public interest, common carriers engaged in transportation in interstate commerce. (For details, see YEAR BOOK for 1940.) Part IV of the Interstate Commerce Act, approved May 16, 1942, conferred upon the Commission jurisdiction over freight forwarders. Many times during the present war the Commission has exercised emergency powers under which it may direct that certain traffic have preference or priority in transportation. Chairman: J. Haden Alldredge.

See RAILWAYS.

INTERSTATE LEGISLATION. See STATE LEGISLATION under *Interstate Legislation and Uniform Laws*.

INVENTIONS. See PATENT OFFICE.

INVENTORIES. See BUSINESS REVIEW; WAR PRODUCTION BOARD under *Civilian Requirements*; articles on products; also, LIVING COSTS.

INVESTIGATION, Criminal. See FEDERAL BUREAU OF INVESTIGATION.

INVESTIGATIONS, Congressional. See UNITED STATES under *Congress*.

IOWA. A west north central State. Area: 56,280 sq. mi. Population: 2,538,268 (1940 census); 2,294,184 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Bourke B. Hickenlooper (Rep.), inaugurated in January, 1943, for a two-year term; Lieutenant Governor, Robert Blue; Secretary of State, Wayne M. Ropes; Attorney General, John M. Ranckin.

IRAN (PERSIA). A kingdom of southwestern Asia, the southern and northern districts of which were occupied by British and Russian forces in 1941. Capital, Tehran (Teheran); ruler, Mohammed Riza Pahlevi, who ascended the throne upon the abdication of his father, Riza Shah Pahlevi, on Sept. 16, 1941.

Area and Population. Area, about 628,000 square miles; population, estimated at 15,000,000, including besides the dominant Iranians large minorities of Turks, Kurds, Leks, Baluchis, and Gipsies. There are about 3,000,000 nomads. Populations of the chief cities as officially estimated Mar. 1, 1940, were: Tehran and district, 540,087; Tabriz, 219,000; Meshed, 139,000; Shiraz, 119,000; Isfahan, 100,000; Hamadan, 99,000; Resht, 89,000; Kermanshah, 70,000; Kazvin, 60,000; Kerman, 59,000; Sulatanabad, 55,000; Abadan, 40,000.

Education and Religion. Despite rapid extension of educational facilities in recent years, the population remains largely illiterate. There were 4,939 schools

with 273,680 pupils in 1937. Tehran has a university. The people are mainly Moslems of the Shiite sect; there are also about 50,000 Armenians, 40,000 Jews, 30,000 Nestorians, and some native Christians, Bahaists, and others.

Defense. Iran in 1942 was reported to have a fairly well equipped army of about 100,000 men; an air force of 150 machines, mainly of British origin; and a small fleet in the Persian Gulf. At the request of the Iranian Government, Col. H. Norman Schwarzkopf, former superintendent of the New Jersey State Police, was sent to Iran in 1942 to reorganize the national police.

Production. Agriculture and stock raising are the main occupations, supporting 80 per cent of the population, but the oil industry is the chief source of government revenue. Production of the chief crops in 1941-42 was reported as follows, in metric tons: Wheat, 1,400,000 (about 1,200,000 in 1942-43); barley, 600,000; rice, 320,000; almonds, 5,000 (6,000 in 1942-43); raisins, 20,000 in 1942-43; cotton, 50,000 in 1940. Sugar beets, tobacco, sesamum and raw silk are other crops. The sheep population is placed at 16,000,000; the 1942-43 wool clip was about 12,000 metric tons.

Iran ranked fourth among the oil producing countries in 1941, with an output of 6,708,000 metric tons (8,748,000 in 1940). The oil industry is British-controlled (see *History* for profits of Anglo-Iranian Oil Co. in 1942). Some coal and copper are mined. Carpet making is the chief manufacturing industry. Recently erected government plants produce cement, matches, cotton and woolen yarns and fabrics, refined sugar, silk textiles, and iron and steel.

Foreign Trade. For the year ended Mar. 20, 1942, imports totaled 791,095,650 rials (1,018,713,830 in 1940-41). Commercial exports were valued at 811,910,560 rials (925,381,010 in 1940-41) and shipments of the Anglo-Iranian Oil Co. at 1,011,336,870 rials (1,313,591,268). Over half the kingdom's trade is normally with the British Empire. Imports from the United States in 1941-42 were 160,301,080 rials (72,505,370 in 1940-41); exports to the United States, 166,988,640 rials (124,135,360 in 1940-41).

Finance. Actual budget returns have not been published for some years. For the 1942-43 fiscal year receipts were estimated at 3,137,822,940 rials (3,613,768,720 in 1941-42) and expenditures at 3,137,695,050 rials (4,323,911,680). Paper currency in circulation rose from 1,585,000,000 rials on Dec. 20, 1941, to about 2,988,000,000 rials on Oct. 20, 1942. The rial was pegged at 17.1 to the U.S. dollar on Dec. 21, 1939, at 35 to the dollar on Sept. 21, 1941, and at 32.5 to the dollar on May 13, 1942. Average official exchange rate of the rial: \$0.05092 in 1941, \$0.02902 in 1942, and \$0.03077 in January-March, 1943. Dr. Arthur C. Millsbaugh, former American financial adviser to the government, was appointed Administrator-General of Finances in November, 1942.

Transportation. Following the Anglo-Russian occupation of Iran in 1941, the country was developed during 1942 and 1943 into an important route for the transportation of British and American war supplies to Russia. See 1943 YEAR BOOK for 1942 developments, and below under *History* for those of 1943. The principal transportation features are the 866-mile Trans-Iranian Railway from Bandar Shahpur on the Persian Gulf to Bandar Shah on the Caspian Sea via Tehran (with branch lines to Tabriz, terminus of the Russian Caucasus rail network; Meshed; and Khorram Shahr, the new port opened in 1942 in the Shatt-el-Arab); the highway

network of 15,043 miles in 1940 (subsequently greatly improved and extended to handle war traffic); and the British air line connecting Tehran with Kermanshah and Baghdad. The U.S. Army's air transport command operated an important transport and plane ferry service into Southern Iran.

Government. As a result of the Anglo-Russian intervention in 1941 and the forced abdication of Riza Shah Pahlevi, a constitutional monarchy was formally proclaimed by the new Shah, Mohammed Riza Pahlevi, on Sept. 20, 1941 (see 1942 YEAR BOOK, p. 289-290). Legislative powers were vested in the Medjliss (legislature) of 136 members elected for two years and executive powers in the Shah and his Cabinet, which is responsible to the Medjliss. The pro-Ally Cabinet formed Aug. 3, 1942, was headed by Premier Ahmad Qavam Sultaneh. By the treaty of alliance signed by Iran with Britain and Russia on Jan. 29, 1942, the latter powers obtained the right to control Iran's communication facilities and station troops wherever necessary. However they pledged themselves to "respect the territorial integrity, sovereignty, and political independence of Iran" and to withdraw all their forces within six months after the end of hostilities with Germany and her associates. For 1943 developments, see below.

HISTORY

Movement of Supplies. The movement of war and other supplies from the United States and the British Empire to the Soviet Union across Iran assumed huge proportions during 1943 as new roads and connecting railways were completed and additional railway and highway transportation equipment placed in service (see above under *Transportation*). Early in March the first all-American truck convoys from Persian Gulf ports began to reach Kazvin in the Soviet-controlled zone of northern Iran, where supplies were transferred to Russian trucks. In the autumn the American truck convoys commenced to carry supplies all the way from the Persian Gulf to the port of Pahlevi on the Caspian Sea.

The first all-American train carrying U.S. war supplies to Russia via the Trans-Iranian Railway steamed into Tehran from the Persian Gulf on March 30. From Tehran the goods were sent northward in Russian-controlled trains. By autumn the Persian Gulf Service Command of the U.S. Army had more than 150 American locomotives and over 3,000 freight cars in operation. Nearly 6,000 tons of supplies were being unloaded daily from three Persian Gulf ports for shipment north by rail. A steady stream of American planes were being flown to Russian-held airports in northern Iran for delivery to the Red Army.

Meanwhile the United Kingdom Commercial Corporation (q.v.) speeded the parallel flow of supplies to Russia from ports and railheads in southern Iran, India, and Iraq. Completion of a new 800-mile highway in eastern Iran to facilitate delivery of Indian military and civilian supplies to the Soviet Union was announced in New Delhi December 5. Over a thousand trucks were engaged in transporting supplies over this one route. Anglo-American shipments were said to be piling up in northern Iran faster than the Russians could move them.

Political Difficulties. With the removal of the threat of German invasion of Iran, political tension grew between the Iranians and the occupying powers (Britain and Russia), and among the Russians, British, and Americans. The Russians were said to have isolated the three northern provinces of the

kingdom, ousted the Shah's tax collectors, and barred Persian, British, and American travelers alike from that region. Differences arose between the Iranian and Soviet Governments in connection with the negotiation of a clearing and exchange agreement. Moreover the Russians were said to have moved troops southward into the British-controlled zone without consulting their allies. In some quarters it was feared that they planned to stay in Iran.

The Russians, on the other hand, were reported to have viewed with uneasiness the expansion of U.S. armed forces in Iran as well as British influence in Tehran. Apparently they, too, suspected that the U.S. and British forces might not withdraw at the end of the war. At Marshal Stalin's request, the issue was said to have been discussed at the Moscow Conference of the Anglo-American-Soviet Foreign Ministers late in October. These discussions paved the way for the Declaration on Iran issued by Stalin, President Roosevelt, and Prime Minister Churchill on December 1 following their historic conference at Tehran (see UNITED NATIONS). The declaration asserted that the three Governments were "at one with the Government of Iran in their desire for the maintenance of the independence, sovereignty, and territorial integrity of Iran." They pledged continuance of all possible economic assistance to Iran and said they counted upon Iran's participation "in the establishment of international peace, security, and prosperity after the war, in accordance with the principles of the Atlantic Charter."

This accord helped to clear the atmosphere. It was reported from Tehran December 10 that American, British, and Russian representatives were busily at work on a treaty or agreement with the Iranian Government effectuating the Tehran Declaration, but no agreement was announced up to the end of the year.

Other Developments. The Ministry formed by Ahmad Qavam Sultaneh in August, 1942, resigned in mid-February, 1943, for reasons not disclosed in the press announcement. Sultaneh's predecessor, Ali Soheily, formed a new Cabinet on February 15. Before receiving a strong vote of confidence from the Medjliss on February 22, he assured the Deputies that "there is no reason to be alarmed because the Americans came to execute works to help their Allies." This would indicate that some members of the Medjliss were also fearful of U.S. intentions.

Meanwhile U.S. lend-lease aid, promised on May 2, 1942, began to reach Iran. Among the deliveries were 700 motor trucks. A U.S.-Iranian trade agreement signed on Apr. 8, 1943, reduced the American tariff on Persian rugs and other products in return for reciprocal concessions. On September 1 the Medjliss authorized the War Department to purchase war material worth \$1,500,000 from the United States. On September 9 the Iranian Government declared war on Germany and adhered to the United Nations Declaration of Jan. 1, 1942. At the request of the Iranian Government, the United States on November 27 contracted to send a military mission to Iran for two years (from Oct. 2, 1942) to assist in reorganizing the Iranian Gendarmerie (national police). The agreement merely formalized an existing arrangement.

A reorganization of the Soheily Government in mid-December was attributed to the influence of the Tehran Conference. At the same time the Iranian Government began to press Britain and Russia for the withdrawal of their armies of oc-

cupation—but not of the military units engaged in the transportation of supplies. The young Shah in an interview on December 31 urged that the Iranian army be permitted to "cooperate much more with the Allies." The Shah also outlined a postwar program of internal development calling for improved housing, sufficient food for everyone, and free and obligatory public education and public health facilities.

Economic conditions remained extremely difficult in 1943 as a result of acute shortages of food and of imported manufactures which caused serious price inflation. In accordance with the food agreement made with Iran Dec. 4, 1942, the British and American Governments shipped in some 65,000 tons of grain during the year ended in August, 1943. The British assisted the Iranian Government in reclaiming some 10,000 acres of land in southern Iran and planting it to wheat and barley. Agricultural machinery from the United States was brought in to expand this scheme. The 1943 harvests were better than in 1942 but the large numbers of Allied troops in the kingdom continued to create a food scarcity. As a price stabilization measure, the Government on May 23 established an import monopoly over cotton products and many other staple commodities.

In January it was announced that over 100,000 Poles had arrived in Iran from Russia to join Polish forces in the Near East. A typhus outbreak of limited proportions was reported in April, with some hundreds of cases involved. The chairman of the Anglo-Iranian Oil Co., Ltd., stated in September that the firm's trading profits rose from £6,032,347 in 1941 to £12,418,616 in 1942, making possible a dividend of 20 per cent after setting aside £2,000,000 for extra depreciation and placing £1,000,000 to a war contingency and deferred repairs account.

See GREAT BRITAIN under *History*; PORTS AND HARBORS; UNITED NATIONS; WORLD WAR.

IRAQ (IRAK). An Arab kingdom occupying the basin of the Tigris and Euphrates Rivers in Mesopotamia. Capital, Baghdad, King, Feisal II, who succeeded to the throne Apr. 4, 1939.

Area and Population. Area, 116,600 square miles; population, estimated at 3,700,000 on Jan. 1, 1940 (about 80 per cent Arabs and 16 per cent Kurds). Chief cities, with estimated populations (1938): Baghdad, 340,000; Mosul, 98,000; Basra, the chief port, 62,000. Language, Arabic.

Education and Religion. Despite free primary education, illiteracy remains high. State school statistics for 1939-40: Infant, 34 schools, 5,174 pupils; primary, 669 schools, 85,792 pupils; intermediate, 42 schools, 11,697 pupils; secondary, 14 schools, 2,312 pupils; vocational and normal, 12 schools, 2,477 pupils. Private elementary schools numbered 72 with 17,495 pupils. There were also colleges of medicine, pharmacy, law and military science, and a higher normal school, all coeducational except the Military College. In 1935 there were 3,136,632 Moslems, 101,375 Christians, and 90,970 Jews.

Production. The principal occupations are agriculture, stock raising, and petroleum mining. Most of the petroleum output goes from Kirkuk, Iraq, by pipeline to Haifa, Palestine. The other pipeline to Tripoli, Syria, was closed in 1940. Petroleum production declined from 4,116,000 metric tons in 1939 to 3,240,000 in 1940 and 1,680,000 in 1941. Estimated yields of the chief crops in 1942 were (in tons): Wheat, 400,000; barley, 600,000; rice, 350,000; giant millet, 70,000; millet, 20,000; corn, 10,000. Iraq's date exports (143,000 tons in 1941)

normally account for 80 per cent of the world's total. Cotton (25,142 bales in 1942) and tobacco are other crops. The 1942 wool clip was about 5,000 metric tons. Several large irrigation projects are expanding the area under cultivation.

Foreign Trade. Including reexports, but not goods imported for British military forces, imports in 1942 were valued at 11,568,000 dinars (6,948,000 in 1941). Exports, excluding reexports and crude petroleum exported by pipeline, amounted to 4,476,000 dinars (3,906,000 in 1941). For the chief import and export items and the distribution of trade by countries, see preceding *YEAR BOOK*. Iraq's transit trade approaches the foreign trade in value and importance. In 1941 the incoming transit trade totaled 7,400,000 dinars and the outgoing trade an equal amount.

Finance. For the year ended Mar. 31, 1943, actual ordinary budget receipts were 9,814,000 dinars (6,700,000 in 1941-42) and ordinary expenditures 10,350,000 dinars (7,500,000 in 1941-42). Ordinary defense costs were 3,018,000 dinars in 1942-43 (2,300,000 in 1941-42). Capital revenues (mostly oil royalties) were 2,190,000 dinars and expenditures 887,000 dinars in 1942-43 (3,200,000 and 900,000 respectively in 1941-42). Ordinary budget estimates for 1943-44: Revenues, 9,283,000 dinars; expenditures, 12,298,000. Capital works estimates: Revenues, 3,524,000 dinars; expenditures, 1,521,000. The public debt on Jan. 1, 1940, was unofficially estimated at 5,752,000 dinars. The dinar, which is pegged to the pound sterling, exchanged at \$4.032 in 1941 and \$4.035 in 1942 (official rate).

Transportation. The route mileage of railways open in 1940 was 947 miles; sidings, 168 miles. Completion in 1940 of the Baiji-Mosul railway link gave Basra and Baghdad rail connections with Mosul and the railway networks of Syria and Turkey. Highways of all descriptions extended 6,543 miles in 1940. The surfaced military road between Haifa (Palestine) and Baghdad was reported completed in 1942. A 550-mile surfaced highway between Baghdad and Damascus (Syria) was completed early in 1943. Air services were maintained by British planes during 1943 from Baghdad to India, Iran, Palestine, Syria, and Egypt. Planes of the U.S. Army's air transport command carried a large volume of freight and passenger traffic into Iraq during 1943. A total of 173 steamers of a gross registered tonnage of 818,393 entered the port of Basra during 1940-41. Improvements were made to the port subsequently to handle greatly increased military traffic.

Government. Following conclusion of an Anglo-Iraqi alliance on June 30, 1930, the League of Nations mandate for Iraq held by Great Britain was abolished and Iraq was admitted into the League as an independent kingdom on Oct. 3, 1932. The constitution of Mar. 21, 1925, made Iraq a constitutional hereditary monarchy with a parliamentary form of government. There is a Senate of 20 members nominated by the King for eight years and a Chamber of 115 elected Deputies. Feisal II, born May 2, 1935, the grandson of Feisal I, inherited the throne Apr. 4, 1939. Emir Abdul Ilah, uncle of the boy King, was elected Regent by Parliament. The Regent was driven out of Iraq by the anti-British coup of Apr. 4, 1941, but was restored to power through British military intervention the following May 24 (see 1942 *YEAR BOOK*, p. 292). British military forces obtained control of all vital communication and transportation facilities, together with the right to enter Iraq freely and to build strategic roads for its defense.

History. The declaration of war by the Iraq Government against Germany, Italy, and Japan as from midnight of Jan. 16-17, 1943, was not unexpected. It had been clearly foreshadowed by the developments of 1942 (see 1943 *YEAR BOOK*, p. 333). Nevertheless Iraq's action was important. It was the first independent Moslem state to enter the conflict. Moreover the proclamation of a state of war assisted the Regent and Premier Nuri es-Said in rooting out anti-Government elements from the army and public service and in fighting the pro-Axis propaganda broadcast to Iraq from Berlin and Rome by the exiled Grand Mufti of Jerusalem and ex-Premier Rashid Ali Al-Gailani.

Iraq armed forces were placed at the disposal of the British in guarding against sabotage of the Iraq oilfields and pipelines. On January 22 the Iraq Government adhered to the United Nations Declaration of Jan. 1, 1942, and on March 7 it granted American and other United Nations forces in Iraq the same legal and financial immunities as those enjoyed by British forces under the Anglo-Iraqi alliance of 1930.

The boy King, Feisal II, celebrated his eighth birthday on May 2 by broadcasting a message in English over the B.B.C. for the first time. His uncle, the Regent, who with the pro-British Premier Nuri es-Said was the actual ruler of Iraq, was reported in an unconfirmed Berlin broadcast of June 4 to have narrowly escaped assassination by a group of nationalists. According to this report, several officers accompanying the Regent were killed. A state of siege was then said to have been proclaimed in Baghdad and 40 students and numerous officers and civilian officials arrested. On November 4 the Regent arrived in London on his first visit to England.

Iraq's entrance into the war strengthened Premier Nuri Pasha's hands in his subsequent parleys with other Arab and Moslem leaders looking toward the establishment of an Arab federation (see *EGYPT* under *History*) and in his opposition to Zionist aims in Palestine (q.v.). The Iraqi Government also strongly supported Lebanese officials in their dispute with the French High Commissioner at Beyrouth in November. On November 13 the Premier informed the Iraqi Parliament that his Government had asked for the removal of French authority in Lebanon until the end of the war and the settlement of the Lebanese Republic's status at a peace conference. Negotiations for the establishment of diplomatic relations between Iraq and the Soviet Union were reported under way at the year's end.

Price inflation and the scarcity of consumer commodities were reported more serious in Iraq than in most of the other countries of the Middle East. A rent control law was enacted March 21 but failed to check rising rentals. The Government was forced to grant cost-of-living allowances to most of its employees and to issue them margarine, soap, sugar, flour, etc., at moderate prices. The £1,000,000 loan raised in London in 1937 was redeemed on July 5.

See *ARCHAEOLOGY*; *EGYPT* under *History*; *WORLD WAR*.

IRELAND. See *GREAT BRITAIN*; *EIRE*; *IRELAND*, *NORTHERN*.

IRELAND, Northern. An area, largely coextensive with the region of Ulster, in the north of Ireland; consisting of six counties and two parliamentary boroughs, it is integrally united with Great Britain. Capital, Belfast.

Area and Population. The area is 5,237 square miles and the estimated population on Jan. 1, 1940, was 1,300,000 (1,279,745 at the Feb. 28, 1937, census). Live birth rate in 1942, 23.0 per 1,000 inhabitants (20.8 in 1941); death rate, 13.4 in 1942 (15.2 in 1941). The population of Belfast in 1937 was 438,086; of Londonderry, 47,813. The 1937 census showed 428,290 Roman Catholics, 390,931 Presbyterians, 345,474 Episcopalians, 55,135 Methodists, and 59,915 of other faiths. As of Jan. 1, 1942, there were 1,681 public elementary schools with 183,786 pupils, 75 secondary schools with 14,447 pupils, 108 technical schools with 20,526 students, and one university (at Belfast) with 1,604 students.

Production. Agriculture and manufacturing are the chief occupations. The area under crops increased from 919,701 acres in 1938 to well over 1,000,000 in 1942; there were nearly 100,000 acres under flax in the latter year against 20,000 acres in 1938. Livestock, meat, milk, eggs, poultry, and bacon are shipped to Great Britain. At the beginning of 1939, livestock included 700,564 cattle, 551,262 sheep, 565,726 swine, and 6,038,000 poultry. Some 70,000 persons are engaged in linen manufacture alone. Other industrial products are tanks, arms of all kinds, military supplies, ships, cotton textiles, preserves, canned foods, machinery, airplanes, furniture, clothing, tobacco products, leather goods, etc. Herring fishing is an important summer industry. About 2,000 persons are employed in mines and quarries.

Finance. For the fiscal year ended Mar. 31, 1943, budget estimates placed net receipts of the Northern Ireland Government at £17,500,000 and expenditures at £17,416,000, as against actual returns of £16,263,092 and £16,220,618 respectively in 1941-42. These totals were exclusive of Northern Ireland's contribution to the cost of Imperial Services, which totaled £11,750,000 in 1941-42.

Transportation. In 1942 Northern Ireland had about 717 miles of main-line railways, 180 miles of canals, and over 13,200 miles of roads. Air services linked Belfast with the principal cities of Great Britain. The chief seaports are Belfast, Londonderry, Newry, Larne, and Coleraine.

Government. Although an integral part of the United Kingdom and represented by 13 members in the British House of Commons, Northern Ireland exercises a degree of local autonomy, through a Parliament of its own and a cabinet responsible thereto. The Senate of this Parliament has 24 elected and 2 ex-officio members; the House of Commons has 52 members, all elected. The composition of the House of Commons elected Feb. 9, 1938, was: Unionists, 39; Nationalists, 8; Independent Unionists, 2; Labor, 2; Independents, 1. The chief permanent officer is a Governor (since 1922, the Duke of Abercorn). The head of the cabinet is a Prime Minister (Sir Basil Brooke since May 6, 1943). For developments in 1943, see below.

History. Rising opposition within the Unionist party to the alleged "lack of ginger" in Prime Minister J. M. Andrews' leadership led to the resignation of two of his Cabinet members, Deputy Premier Sir Basil Brooke and Attorney General James MacDermott, on April 24. This forced Andrews' retirement at the end of April and led to the formation on May 6 of a new Government headed by Sir Basil Brooke as Prime Minister and Minister of Commerce. The other new Cabinet members were: Finance, J. M. Sinclair; Home Affairs, W. Lowry; Labor, William Grant; Education, the Rev. Professor R. Cortey; Agriculture, the

Rev. R. Moore; Public Security, H. C. Midgley (Labor). The Cabinet contained two Presbyterian ministers and the first Labor representative ever to win a seat on the Northern Ireland Government.

The policy of the new Government, as outlined by Prime Minister Brooke, called for vigorous prosecution of the war and permanent union of Northern Ireland with Great Britain. In an interview in London on May 14 he said there was an irreconcilable conflict of loyalties between the people of northern and southern Ireland, but that Northern Ireland and Eire could be good neighbors "provided Eire ceases to interfere in our affairs." See *EMRE* under *History*.

After serving two months of a 15-year sentence for treason, Hugh McAteer, 25-year-old chief of staff of the illegal Irish Republican Army, escaped from Belfast prison with three associates on January 15. A reward of £3,000 was posted for information leading to his recapture. On April 24 he appeared with a number of heavily armed associates in a Belfast theater in the nationalist district and held a brief memorial service for Irish patriots killed in the 1916 Easter rebellion in Dublin. Before disappearing he read a statement protesting the presence of American soldiers in Northern Ireland as an "invasion of our rights" and warned that they would become involved in "a resumption of hostilities between the Irish Republic and Great Britain." However the police rounded up one of McAteer's chief lieutenants, James Steele, on May 29 and captured the I.R.A. leader himself on November 20.

Early in March the police made a series of raids in search of I.R.A. arms caches and hideouts and interned a number of suspects. This brought a protest from the Bishop of Down and Connor, which was read in all Belfast Roman Catholic churches on March 7. Attorney General McDermott announced on March 11 that captured documents disclosed an I.R.A. plot to assassinate policemen and initiate other measures to disorganize the war industries, civil defense services, and transport facilities of Northern Ireland. For the illegal possession of firearms and ammunition, two youths were sentenced to 10 years' penal servitude and a flogging by a Belfast court on April 20.

It was announced in August that a huge plant for the repair, modification, and assembly of American-built planes was in operation in Northern Ireland. It was operated by the Lockheed Overseas Corporation under the Service Command of the U.S. Eighth Air Force.

IRIDIUM. See **PLATINUM**.

IRON AND STEEL. Production of steel in the United States in 1943 exceeded previous records and came within a few million tons of equaling the total steel output of the balance of the world.

At the beginning of the year, steel mills were accelerating production by every possible means in order to meet unprecedented requirements of war industries. War needs averaged more than 3,750,000 tons of finished steel per month, about three quarters of production. At the end of the year cutbacks in war programs caused the steel industry to tread heavily on the brakes, to curtail further expansion wherever possible, to reduce operating rates, and even to look for customers for some products.

Alloy steels, which throughout 1942 had been so scarce as to be ranked almost as precious, were the first to pass from scarcity into plenty. This may be explained by the heavy requirements for

alloys in the manufacture of basic production machinery. As war plants neared the end of their tooling up programs, demand for alloys naturally became less. Carbon steel, the bread and butter of industry's production diet, remained scarce in most products almost until the end of the year. From October 28 until December 24, the War Production Board ordered that certain alloy steels be produced only in electric furnaces in order to free open hearth furnaces for the larger and less costly production of carbon steel. By mid-December, however, open hearths in some districts were being shut down for lack of business, and it was apparent that carbon steel in its raw, unfinished form exceeded the capacity of mills to roll it into such vitally needed finished products as plates for ships and landing craft. About the same time, pig iron, which with scrap enters into the production of steel, became sufficiently plentiful to be removed from allocation commencing February, 1944.

Blast furnaces turned out more pig iron than ever before, about 62,800,000 net tons (including ferro-alloys), compared to 60,903,304 net tons in 1942, 56,686,604 net tons in 1941, and from 43 million to 44 million net tons during 1916, 1917, and 1918. Some of this pig iron went to foundries to produce iron castings. The balance was converted by open hearth, bessemer, and even electric furnaces, with scrap steel added to the charge, into 88,872,598 tons of ingots and raw metal for steel castings. This so-called "raw steel" was rolled, drawn, or forged into 67,278,221 tons of finished steel products, the difference in tonnage being returned to the steel furnaces as scrap. In all these categories new production records were set. In 1942, 86,092,209 net tons of ingots were produced; in 1941, 82,836,946 net tons; in 1918, 48,882,299 net tons. In 1942, 63,728,056 tons of finished steel were produced; in 1941, 62,324,187 tons; in 1917, 37,035,824 net tons.

About 20 per cent of finished steel was plates, reflecting the shipbuilding program. Actual plate production exceeded rated capacity by nearly 40 per cent, this overload being achieved by the conversion of continuous strip mills to the rolling of plates. At the end of 1943, delivery on many types of alloy steels, carbon steel bars, and structural steel could be made immediately or within a few weeks' time. Orders placed for plates and other flat rolled products could not be delivered until well into 1944, however. About 80 per cent of the plates produced went to the Army, Navy, or Maritime Commission. New records were made during the year in the rolling not only of plates, but hot rolled and cold finished bars, both carbon and alloy steel, and seamless steel pipe and tubing. Shipments of alloy steel bars and cold finished carbon bars exceeded 1942 by about 40 per cent. About one quarter of the record breaking steel output went to such civilian industries as petroleum and mining, public utilities, railroad equipment manufacturers, and container makers. In 1940 those industries consumed nearly 40 per cent of the steel then produced. Not all of the steel being shipped to war plants was being consumed immediately, however. It was estimated that the end of the war would find from 10 million to 30 million tons in the inventories of these plants, much of it special steel not fitted for other use.

Concerted drives inaugurated in 1942 to draw scrap iron and steel from homes, farms, stores, and factories, were continued in 1943. The 1942 collections represented accumulations of years by many homes and farms, however, and not as much

was forthcoming from these sources in 1943. Factories and railroads "generated" scrap in proportion to their activities, and it was reported that 2,500,000 automobiles had been junked by auto wreckers in two years' time. At the end of the year stocks amounted to about 6,500,000 tons, enough to carry through the winter by a close squeeze provided incoming shipments met expectations. Although cast iron scrap was almost nonexistent, and carbon steel scrap relatively scarce, alloy steel scrap was produced at the rate of 100,000 tons per month above consumption in the latter part of the year. The WPB hoped to decrease this surplus by increasing the proportion of alloy steel scrap used in furnaces producing alloy steel. Average consumption in December was about 41 per cent of the total charge in open hearth furnaces, about 37.5 per cent in electric furnaces producing alloy steel. See WAR PRODUCTION BOARD under *Balanced Production and Salvage*.

Distribution of steel among consumers in 1943 was under the Controlled Materials Plan inaugurated by War Production Board (q.v.). Under this plan, each consumer estimated his requirements for each type of steel. These estimates then were compared with total amounts available, and allotments were made only for as great a proportion of the estimated requirements as could be provided. This plan replaced the former Production Requirements Plan, under which top priority consumers were practically enabled to take as much as they wished, leaving none for many less important, but essential plants.

As output began to pass demand, the government's expansion program became something of an embarrassment. With more electric furnace-produced steel available than could be used, and with electric furnaces idle, the expansion program was 93 per cent complete at the end of December, 1943, and scheduled to be finished in February, 1944. With open hearths shut down at the end of 1943 for lack of business, and with more pig iron available than could be used, the open hearth and blast furnace programs were 85 per cent complete. The open hearth program was not scheduled to be finished until April, 1944, the blast furnace program until June.

On the Pacific Coast, where steel plants previously had operated by melting scrap exclusively, pig iron was produced from local ores, converted to steel, and rolled into plates by the Kaiser Co. mill at Fontana, Calif. The much larger fully integrated mill of Geneva Steel Co., United States Steel Corp., subsidiary, at Geneva, Utah, was scheduled for completion in early 1944, indicating that for the first time in history the far west would be self-sufficient for some types of steel products.

Upon completion of new plants now under construction, Latin American nations will have a combined capacity for production of approximately 1,400,000 tons of steel ingots and castings, somewhat less than the size of the steel industry of pre-war Poland and somewhat more than that in Sweden. This new capacity will enable Latin America to produce about 50 per cent of total consumption at the 1936 rate, although many types of products still will have to be imported. Canada failed to reach its goal of three million tons of ingots, with supply and demand closely paralleling (on a smaller scale) the United States throughout the year.

Finished steel prices were constant throughout the year, the composite price compiled by *The Iron Age* (weighted upon the basis of expected sales of steel bars, beams, tank plates, wire, rails,

black pipe, hot and cold rolled sheets, and strip) remaining upon a revised basis of 2.25513 cents a lb. throughout. Upon the revised weighted basis, reflecting proportionate sales during 1942, the composite for that year was 2.26190 cents per lb. For prices of other products see 1943 YEAR BOOK.

A brief walkout occurred in the steel industry in December, collaterally with the threatened railway strike, as a result of lack of a new contract on the part of the United Steelworkers (C.I.O.). Assurances by the National War Labor Board (q.v.) that any wage adjustments made within the existing stabilization policy would be retroactive to the expiration of old contracts prompted Philip Murray, United Steelworkers head, to call the 170,000 idle workers back to their posts after being out one day beyond the weekend. For hours of work in the industry, see LABOR CONDITIONS.

See IRON ORE; also, BENTONITE, CHROMIUM, MOLYBDENUM, NICKEL, and other minerals and metals. See BRIDGES, ELECTRICAL INDUSTRIES, MACHINE BUILDING, and other industries employing steel. For research, see CHEMISTRY.

CHARLES T. POST.

IRON ORE. Iron ore production in the United States in 1943 amounted to 113,554,000 net tons, as estimated by the U.S. Bureau of Mines. This was a decrease of 4 per cent from the record total of 118,189,336 tons in 1942. Of the 1943 total, the Lake Superior district produced 96,646,000 tons.

Iron ore shipments on the Great Lakes started late and ended late in 1943. The shipping season started late in April, more than a month behind the 1942 opening, but it was not until the week of December 12 that the final boat docked at lower lake ports. The War Production Board was forced to trim its quota for lake iron ore shipments from 95 million gross tons to 94 million gross tons, then to 91 million gross tons, and finally to 86,500,000 gross tons. When the final boat had docked, 84,404,852 gross tons had been transported by lake from the Superior district, and another two million tons by rail. Despite the failure to meet original estimates, the season was officially reported by the Office of Defense Transportation to have been "very successful." It was pointed out that the shipments would have been considerably larger had not the War Production Board authorized the shift of some ore boats to the grain trade in order to move an added tonnage of seed grain to the eastern United States. The ore tonnage moved was considered sufficient to assure all steel plants using Lake Superior ore at least a 50 day stockpile as of Apr. 1, 1944. That would be adequate for requirements until May 20, by which time a new supply would be assured, since navigation normally commences by April 20.

Lake shipments for other recent years were as follows:

Year	Gross tons	Year	Gross tons
1942.....	92,076,781	1938.....	19,263,011
1941.....	80,116,360	1937.....	62,598,836
1940.....	63,712,902	1936.....	44,822,023
1939.....	45,073,052	1935.....	28,362,368

Meanwhile, the steel industry (see IRON AND STEEL) developed an unprecedented appetite. Iron ore consumption reached 89,027,689 gross tons, compared with the previous record of 86,225,460 tons consumed in 1942.

On December 16, the ceiling price for standard Mesabi non-Bessemer iron ore produced in the Lake Superior district was raised to \$4.45 per gross ton from \$4.30 per gross ton, at which it

had been frozen since the shipping season of 1941. The increase, according to the Office of Price Administration, was necessitated by rising production costs, particularly higher labor expenses. The new price applied to all ore shipped down the Great Lakes during the 1943 season, on which accounts are settled at the season's close. On the basis of customary differentials, ceiling prices for other standard ores were set as follows: Old Range non-Bessemer, \$4.60 per gross ton, delivered at lower lake ports; Mesabi Bessemer, \$4.60; Old Range Bessemer, \$4.75; and High Phosphorus, \$4.35. In the last war, standard Mesabi non-Bessemer ore rose from \$2.85 per gross ton in 1914, to \$5.75 in 1918, or more than 101 per cent.

Controversy over the life expectancy of Lake Superior iron ore reserves continued, the National Industrial Conference Board, Inc., finally concluding that "it is generally agreed that with proper advance planning sufficient ore can at all times be produced to take care of all needs likely to arise. Costs are expected to be higher than today, however."

Ore deposits located close to the coasts of the United States found a new use during the year. Ore high in iron, thus affording maximum weight per cubic foot, was mined, crushed, mixed with cement, and cast into blocks for use as ballast in newly constructed vessels. Ore used in this manner was a minor part of over-all national production, probably amounting to 100,000 tons for the year.

Ore mined along the West Coast was made into pig iron for the first time in 30 years. The plant of the Kaiser Company, Inc., at Fontana, Calif., used ore mined in the California desert near Kelso.

See GEOLOGICAL SURVEY; PORTS AND HARBORS; WATERWAYS, INLAND.

CHARLES T. POST.

IRRIGATION. See AQUEDUCTS; ARABIA under *History*; DAMS; RECONSTRUCTION FINANCE CORPORATION; TUNNELS.

ISLE OF MAN. See GREAT BRITAIN under *Area and Population*.

ITABIRA IRON MINES. See BRAZIL under *History*.

ITALIAN AEGEAN ISLANDS. The islands in the Aegean near Turkey in Asia. They include the Dodecanese group with Rhodes and Castellos. Their area and population together with their Italian names in parentheses are given in the accompanying table.

Island	Sq. mi.	Pop. (1936)
Astropalia (Stampalia).....	44	2,006
Casos (Caso).....	27	1,890
Castellos.....	4	2,238
Cos (Coo).....	111	19,731
Kalymnos (Calino).....	49	15,247
Karochi (Calchi).....	12	1,461
Karpathos (Scarpanto).....	118	7,770
Leros (Lero).....	28	13,657
Lipso (Lisso).....	7	977
Nisyros (Nisiro).....	18	3,391
Patmos (Fatmo).....	22	3,184
Rhodes (Rodi).....	545	61,886
Symi (Simi).....	25	6,195
Tilos (Piscopi).....	25	1,215
Total.....	1,035	140,848

The total population in 1936 (140,848) comprised 85 per cent native, 12 per cent Italian, and 3 per cent foreign. On Jan. 1, 1940, the total population was 122,000. Chief towns (1936 populations): Rhodes (capital) 27,466, Kalymnos 15,247, Cos 9,852, Symi 6,195.

Production, etc. The principal agricultural prod-

ucts consist of grapes, olives, tobacco, oranges, and vegetables. Livestock (1938): 62,735 goats, 51,907 sheep, 6,460 horses, mules, and donkeys, 4,710 oxen, 2,656 swine. Sponge fishing, and the manufacture of artistic pottery and tiles, tobacco, wine, olive oil, and oriental carpets are the chief industries. Trade (1938): imports 157,421,000 lire; exports 21,851,000 lire (lira was worth \$0.0526 for 1938). Roads (1940): 391 miles.

History. The collapse of the Fascist regime in Rome on July 25, 1943, and the subsequent capitulation of the Badoglio Government to the Allies led to confusion and division among the Italian officials and garrisons of the Aegean Islands. In the ensuing race between British and German forces to gain control, the Germans seized Rhodes and most of the other important islands, while the British took possession of Leros, Cos, Castelrosso and others. In November the Germans attacked the British garrisons on the latter islands, and captured them one by one. See ITALY under *History*; WORLD WAR.

ITALIAN EAST AFRICA. An Italian colony in East Africa established by the decree of June 1, 1936, which merged the old Italian colonies of Eritrea (area, 45,754 sq. mi.; pop., about 650,000 in 1936) and Italian Somaliland (area, 194,000 sq. mi.; pop., 1,010,815 in 1931) with the newly conquered Empire of Ethiopia (area, about 347,500 sq. mi.; pop., estimated at 10,000,000 to 12,000,000). Capital, Addis Ababa.

Italian East Africa was conquered during 1941 by British Empire forces, aided by Allied troops and Ethiopian irregulars. Ethiopia's independence was then restored, while Eritrea and Italian Somaliland passed under direct British control pending postwar determination of their status. See ERITREA, ETHIOPIA, and ITALIAN SOMALILAND.

ITALIAN SOMALILAND. A former Italian colony in East Africa. It was incorporated in Italian East Africa (q.v.) by Mussolini's decree of June 1, 1936, but came under direct British control following the conquest of Italian East Africa by British Empire and allied troops in 1941. Capital, Mogadiscio.

Area and Population. The original Italian colony had an area of some 194,000 square miles and a population at the 1931 census of 1,021,572 (including 1,631 Italians). When it became a province of Italian East Africa adjoining Ethiopian districts were annexed, making a total area of about 270,972 square miles with an estimated population of 1,150,000 in May, 1939. With the liberation of Ethiopia, the original boundaries of Italian Somaliland were restored. The principal cities are Mogadiscio, with an estimated population of 21,000, and Chisimaio, a port near the mouth of the Juba River. The natives are Somalis by race and Moslems by religion.

Production, etc. Stock-raising and agriculture are the principal occupations. There are European plantations and large native cultivations near the Juba River in the southern part of the colony. The latest available crop figures are (in metric tons): Corn, 25,000 in 1938-39; cotton-seed, 700 in 1935-36; sesamum, 1,300 in 1936-37; groundnuts, 1,500 in 1936-37; cane sugar, 4,500 in 1932-33. In 1938 imports were valued at about \$7,800,000 (in old U.S. gold dollars) and exports at \$2,600,000.

Transportation. The only railway line extends from Mogadiscio 70 miles inland to Vil. Duca degli Abruzzi. A network of Italian-built highways connects all the ports and settlements in the interior

and extends into Ethiopia. Previous to the British conquest, steamship services were maintained on the Juba and Webi Shebeli Rivers. Mogadiscio formerly served as the chief Italian port and naval base on the Indian Ocean.

Government. Italian Somaliland remained throughout 1943 under the direct control of the British Army's East African Command. An experienced British colonial official assisted in its administration.

ITALY. A kingdom of southern Europe, upon which a Fascist dictatorship was superimposed from Oct. 22, 1922 to July 25, 1943. Capital, Rome. Sovereign, King Victor Emmanuel III, who ascended the throne July 29, 1900.

Area and Population. Excluding Libya, Albania, and newly annexed Yugoslav territories, Italy had an area of 119,764 square miles and a population estimated at 45,611,000 on Sept. 30, 1942 (42,444,588 at the 1936 census, which did not include 528,542 workers and soldiers in Africa). The four Libyan provinces of Tripoli, Misurata, Bengasi, and Derna (area, 213,876 sq. mi.; pop., 66,287 in 1936) were incorporated in Italy's national territory by the decree of Jan. 9, 1939. See LIBYA. Following the Italian invasion of Albania (q.v.) beginning Apr. 7, 1939, the two countries were joined in a personal union under the Italian King, Apr. 13, 1939. By the decrees of May 3 and May 20, 1941, Italy annexed from Yugoslavia 4,319 square miles with a population of 707,135. These territories were divided into the provinces of Lubiana (area, 1,800 sq. mi.; pop., 305,000) and Dalmatia (area, 2,500 sq. mi.; pop., 402,000). The 1936 census showed 31,735,027 urban and 11,258,575 rural residents. Emigrants in 1940 numbered 67,063. Foreigners in Italy in 1936 numbered 108,597 as compared with an estimated 9,600,000 Italians residing abroad. The Italian live birth rate declined from 23.7 per 1,000 inhabitants in 1938 to 20.2 in 1942; the death rate (including war losses) increased from 13.4 per 1,000 in 1939 to 14.1 in 1942. In 1941 births numbered 937,546; deaths, 621,735.

The city of Rome had an estimated population of 1,327,126 on Jan. 1, 1940. Other chief cities with the estimated populations on Jan. 1, 1939 (not including workmen and soldiers absent in Africa and the Dodecanese), were: Milan, 1,205,542; Naples, 920,460; Turin, 690,015; Genoa, 654,211; Palermo, 431,666; Florence, 351,055; Bologna, 315,158; Venice, 283,926; Trieste, 258,612; Catania, 251,978; Bari, 210,777; Messina, 202,375; Verona, 166,315; Padua, 150,203; Taranto, 151,150; Leghorn, 134,545; Brescia, 134,340; Ferrara, 122,913; Reggio di Calabria, 121,876; Cagliari, 119,934; La Spezia, 119,067.

Colonial Empire. When Italy entered World War II, it had an overseas empire (including Albania and Libya) of 1,279,589 square miles with an estimated population of about 14,186,400. By the end of 1943, the Italians had lost effective control of the whole of their overseas empire. British and Allied forces occupied Eritrea, Ethiopia, and Italian Somaliland in 1941 and Libya in 1942-43. During 1943 Albania and the Italian Aegean Islands as well as the territories annexed from Yugoslavia were occupied by either Allied or German troops. See below under *History* and WORLD WAR.

Education and Religion. School enrollment in 1937-38 was: Elementary, 5,051,306; secondary (including technical and art), 613,588; higher education (1938-39), 77,429. One out of every five adults is illiterate. According to the census of 1931 there were 41,014,096 Roman Catholics (99.6 per cent), 83,618 Protestants, and 47,825 Jews.

Production. About 46.3 per cent of the working population was engaged in agriculture and fishing in 1939, 30.4 per cent in mining, quarrying, and industry, 8.3 per cent in commerce, and 4.6 per cent in transportation. The wheat harvest was estimated at 7,150,000 metric tons in 1941 (7,110,200 in 1940). Estimated output of other crops in 1940 was: Rice, 1,853,350,000 lb.; rye, 5,998,000 bu.; barley, 10,056,000 bu.; oats, 39,318,000 bu.; corn, 135,000,000 bu.; potatoes, 121,211,000 bu.; tomatoes, 2,444,813,000 lb.; sugar beets, 5,200,000 metric tons. Beet sugar output in 1940-41 was 546,500 metric tons; wine in 1940, 30,319,000 hectoliters (of 26.42 U.S. gal.). Other crops in 1940 were (in metric tons): Linseed, 15,300; olive oil, 145,000; ginned cotton, 10,600; flax, 6,900; raw silk, 3,500.

Mineral and metallurgical production, in metric tons, in 1939 (except where otherwise specified) was: Crude petroleum, 12,000; coal, including some lignite, 2,025,000; pyrites, 978,000; sulphur, 376,000; iron ore (metal content), 490,000; pig iron and ferro-alloys, 1,101,000; steel (including that from scrap), 2,321,000; lead, 38,800; zinc, 33,600; bauxite, 484,000; aluminum, 40,000 in 1940; quicksilver, 2,315; silver, 27.4. There were in 1940 a total of 3,825,542 industrial workers, of whom 1,532,675 were employed in plants with more than 250 workers. Textiles, rayon (52,754 metric tons in 1940), chemicals, refined sugar, cheese, and macaroni are leading industrial products. The output of electric current increased from 10 billion kilowatt-hours in 1930 to about 21 billion in 1941.

Foreign Trade. Publication of official trade statistics was suspended after Italy entered the war. However, unofficial figures indicated that imports in 1940 totaled 12,908,000,000 lire (9,938,000,000 in 1939) and exports 9,244,000,000 lire (8,160,000,000 in 1939). These figures exclude trade with the Italian colonies.

Finance. For the six fiscal years ended June 30, 1940, the aggregate budget deficit was more than 82,000,000,000 lire. Excluding war costs, the original budget estimates for 1941-42 were: Receipts, 32,728,100,000 lire; expenditures, 41,936,400,000 (35,424,000,000 and 43,825,000,000, respectively, for 1942-43). In a statement issued Nov. 2, 1941, the Minister of Finance placed war expenditure for the period July 1, 1940, to Oct. 8, 1941, at 76,000,000,000 lire, covered mainly by the proceeds of loans. The public debt rose from 107,268,600,000 lire on June 30, 1935, to an estimated 315,000,000,000 lire on June 30, 1942. Average nominal exchange value of the lira: \$0.0504 in 1940 and \$0.0507 in the first half of 1941.

Transportation. In 1941-42 Italy had about 14,448 miles of railway lines. The Italian State Railways operated 10,664 miles of line, which carried 285,000,000 passengers and 73,000,000 tons of freight. There were about 126,830 miles of highways. The merchant marine on June 30, 1939, comprised 1,350 steam and motor ships of 1,989,482 tons. A large proportion of this fleet was sunk by enemy action, captured, requisitioned, or interned in neutral ports after Italy entered the World War.

Government. With the overthrow of the Fascist dictatorship on July 25, 1943, Italy reverted to the status of a constitutional monarchy as established by the Constitution of Mar. 4, 1848 (see the 1943 YEAR BOOK for the principal features of the Fascist regime). That part of Italy under Anglo-American control was temporarily administered by the AMG (Allied Military Government of Occupied Territory) with the assistance of the King and the constitutional Badoglio Government, while the German-held areas were ruled by German military

authorities with the aid of an Italian Fascist puppet regime (see below under *History*).

On June 10, 1940, the Italian Government declared Italy at war with France and Great Britain, effective the following day. An armistice with the Vichy Government of France was signed the following June 24. Italy attacked Greece without a declaration of war (Oct. 28, 1940), and joined Germany in the invasion of Yugoslavia (Apr. 6, 1941) and of Russia (June 22, 1941) and in declaring a state of war with the United States (Dec. 11, 1941). For war declarations against Italy, see table under *WORLD WAR*.

HISTORY

Course of the War. The Italian people at the beginning of 1943 had good reason for the apprehension and alarm with which they viewed the future (see 1943 YEAR BOOK). This gloomy view was more than justified by the spectacular and terrible events of the ensuing year. The humiliating military defeats of previous years were followed by the loss of Tripoli and the remainder of Libya in January, the rout of many Italian divisions with serious losses in the Russian winter offensive, and the debacle of the large Axis forces in Tunisia in May. Then came the Anglo-American invasion of Sicily in July and of the Italian mainland in September. They toppled the Fascist state in ruins, forced the Italian Government to capitulate, and converted the whole of Italy into a battleground of both international and civil war.

The third anniversary of Mussolini's entrance into the war on June 10, 1940, found the Italian empire completely liquidated, except for a tenuous hold on Albania. Battle casualties of 633,251 were officially admitted. The cities of Naples, Genoa, Palermo, Messina, Turin, and Milan had been devastated by Allied air attacks from British and North African bases. Hordes of refugees flocked into Rome and other cities and districts hitherto untouched by war, clogging transportation lines, disrupting war production, spreading defeatism and demoralization. The economic crisis was intensified. There were acute shortages of food, coal, and manpower. A flight of capital was initiated by the soaring debt, inflation, and the growing certainty of defeat. Corruption in all walks of life became even more rampant. These events paved the way for the overthrow of Premier Mussolini, after nearly 23 years of dictatorial rule, by a coup within the Fascist hierarchy on July 25.

Attempts to Save Fascism. The movement to unseat Mussolini had been gaining strength for months as Italy moved from disaster to disaster under his leadership, meanwhile becoming hopelessly enmeshed in Hitler's net. Although ill with chronic ulcers of the stomach, Il Duce sought to arrest the tide of ill fortune by repeated shake-ups of his Cabinet and the army high command, new purges of disloyal elements within the Fascist party, harsher repression of anti-Fascist movements, and repeated appeals to Hitler for greater German aid.

On February 5 Mussolini dismissed 12 of the most important members of his Government, including his son-in-law, Count Galeazzo Ciano, and announced that he was assuming "the entire burden for the conduct of political and military operations in this delicate phase of the conflict." Ciano on February 7 was named Ambassador to the Vatican, arousing expectation of another peace offer. Eight more under-secretaries were dropped from the Cabinet February 12-13. At the same time Mussolini decreed all able-bodied men between 14 and 70 years of age and women 14 to 60 years old

subject to conscription for work in war factories.

In talks with Foreign Minister Joachim von Ribbentrop in Rome at the end of February and with Hitler at the latter's headquarters early in April Mussolini attempted to obtain more arms and vital commodities from the Reich in exchange for the additional labor, troops, and foodstuffs demanded by the Germans. Hitler was reported to have insisted on sending more Elite Guard troops into Italy instead of the anti-aircraft guns and other arms requested by Mussolini. This tightened the German hold on the kingdom.

Scorza Named Secretary-General. Dismissal of more leading Fascist officials during the latter half of April reflected further friction within the party and opposition to Mussolini's pro-German policies. Aldo Vidussoni was replaced as Secretary General of the party by Carlo Scorza at a meeting of the Fascist directorate (provincial secretaries) in Rome on April 17. Count Giuseppe Volpi, head of the Fascist Chamber of Manufacturers, was one of a number of high officials ousted at that time.

With the collapse of Axis armies in Tunisia, Mussolini on May 8 ordered the Fascist militia and police strengthened and instructed them "to crush relentlessly any attempt to cause disorder or trouble." The toe of Italy was put in a state of alert. On May 13 a Council of Defense was created, consisting of four newly appointed Marshals—Enrico Caviglia, Rodolfo Graziani, Ugo Cavallero, and Emilio de Bono. This quadrumvirate reportedly took over direction of the defense of Italy. They immediately ordered "fuller mobilization" for front-line service and established a zone of military operations including Calabria, Sicily, and Sardinia. Thereafter the King displayed an increasingly independent attitude toward Mussolini and there were signs of a growing rift between the monarchy and the Fascist party.

Beginning in the middle of May, Secretary-General Scorza began another persistent and far-reaching purge of defeatist and anti-German elements in the Fascist party. A central disciplinary court was created. Party leaders were mobilized on a 24-hour basis for "emergency service." Ensuing weeks saw scores of dismissals and arrests and repeated new shake-ups of the party leadership and the Cabinet. Mussolini replaced Gen. Ezio Rossi, Chief of Staff, with Gen. Mario Roatta, former commander of the Second Army in the Balkans, on June 1 and placed Rossi in charge of Italian defenses in Sicily and Sardinia. On June 10 he ousted 19 prefects and transferred six others.

Mussolini Censured. However all efforts to reinvigorate the Fascist party, strengthen military defenses, and restore the national morale were nullified by the inexorable Allied air offensive. The fall of Pantelleria on June 11 led the Premier to convoke a three-day session of the Fascist directorate on June 12-14. Under Scorza's leadership the directorate made a thinly veiled attack upon the conduct of the war by Mussolini and his Cabinet. They submitted a nine-point memorandum calling for more vigorous and more ruthless measures to stamp out defeatism, malingering, speculation, black market operations, and the evasion of compulsory labor service. When Il Duce failed to act, Scorza a few days later began to issue decrees for the total mobilization of hitherto exempt students and to institute other measures called for in the nine-point program.

Mussolini now agreed to these demands. After another meeting of the party's directorate on June 24, it was announced that he had ordered another wholesale purge of party members "who do not

serve the country and the Fascist regime with a religious fervor . . ." According to a statement by Scorza, the party membership had fallen to 4½ millions. The secret police, in a nation-wide roundup of "fifth columnists," arrested some 11,000 anti-Fascists late in June. But labor was becoming increasingly unruly. Despite the use of police and troops to suppress them, strikes spread in the armament industries of northern Italy.

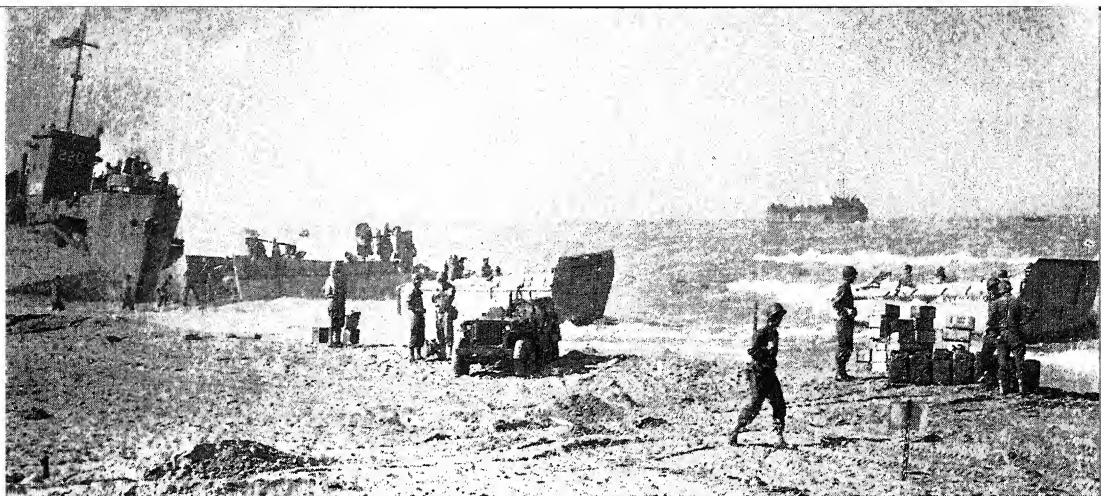
Bombing of Rome. Six days after the Allied invasion of Sicily, President Roosevelt and Prime Minister Churchill on July 16 addressed a joint message to the people of Italy urging their capitulation to avoid greater devastation and warning that they would suffer the consequences if they continued to tolerate "the Fascist regime which serves the evil power of the Nazis." The warning was followed up by heavy Allied air raids on Naples but was scornfully rejected by Carlo Scorza "in the name of the Blackshirt militia" in a radio address to the nation July 18.

The next day Allied planes dropped leaflets over Rome stating that "military objectives in the vicinity of Rome are liable to be bombed by the Allied air force" but giving assurance that every care would be taken to avoid destruction of civilian buildings and cultural monuments. About noon of the same day some 500 Allied bombers, mostly American, made a devastating raid on the San Lorenzo and Littorio railway freight yards, on war factories, and on the Ciampino airfield in and near Rome. According to Rome reports, some of the bombs missed the targets and landed in adjacent residential areas. The Italian High Command in a preliminary report placed the dead at 166 and wounded at 1,659. The Vatican radio announced that the basilica of San Lorenzo was seriously damaged. The Pope voiced his protest in a letter to the Vicar General of the Diocese of Rome.

Fall of Mussolini. The bombing of Rome precipitated a large-scale exodus of the Roman population and brought the political crisis in Italy to a climax. It touched off peace demonstrations in many cities and a new wave of strikes and sabotage. On July 23 the Government ordered the mobilization by August 15 of all men born between 1907 and 1922 inclusive.

During the Allied raid on Rome Mussolini was engaged in conferences with Hitler at Verona on measures to meet the next phase of the Allied invasion of Italy. According to several sources, Mussolini assented to a German plan for a gradual withdrawal from Sicily and from southern and central Italy to a defense line running through the southern limits of Tuscany. Rome was to be abandoned. The plan called for stripping the evacuated regions of all food stores, harvests, and rolling stock in order to force the incoming Allies to feed and sustain the population.

Upon Mussolini's return to Rome he was met with a demand for the convening of the Fascist Grand Council to consider the German military plan and the general situation. At this meeting on July 24 the opposition to Mussolini within the higher ranks of fascism came out into the open under the leadership of Count Dino Grandi, former Ambassador to Great Britain. Aligned with Grandi were Count Ciano, Marshal de Bono, Count Cesare de Vecchi, Giuseppe Bottai, and Senator Luigi Federzoni. Scorza, Gaetano Polverelli, Roberto Farinacci, and Lieut. Gen. Enzo Galbiati at first supported Mussolini, but Scorza and Farinacci were reported to have turned against him as a result of the violent debate that lasted far into the night. It ended when a vote was taken on an order of the



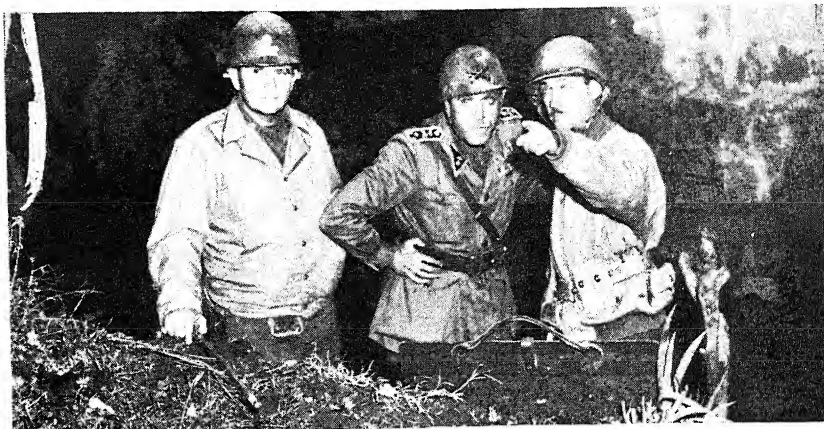
2



U.S. Army Signal Corps

SHORE AND MOUNTAIN OPERATIONS INVOLVED IN THE ITALIAN CAMPAIGNS

1. "D" day on the beach at Gela, Sicily. 2. Smoke shells cover an advance of American infantry near Venafro, Italy. 3. British mortar crew send a terrific barrage against German positions in the engagement at Mt. Camino, Italy. 4. Tanks coming ashore from an LST ramp at the Salerno beachhead.



An Italian Colonel of Artillery (above, center) takes over the direction of an important thrust against his former ally.



General Mark Clark (left, foreground) enters Naples with his aides after the German retreat.

American infantry cautiously enter the shattered town of Acerno.



Signal Corps Photos

INVASION OF THE ITALIAN MAINLAND

day expressing lack of confidence in Mussolini as Head of the Government. The vote was against him by a majority of 19 to 5.

The next morning (July 25) Mussolini presented the German defense plan to his key defense Ministries. At the insistence of the Under-Secretaries of War, Air and Navy, the full Cabinet was then called in session and it was decided, after heated debate, to submit the whole question to the King. Victor Emmanuel flatly rejected the German plan, declaring that Italy would stand or fall together. He reportedly forced the resignation of Mussolini and his Government and called in Marshal Badoglio to form a new Ministry. The fallen leader and some of his lieutenants were placed under arrest. Marshal Badoglio, who apparently had been forewarned of the crisis, sent regular army units into Rome prepared for action. Some of the Fascist militia forces prepared to resist but quickly gave in when advised that they had been incorporated into the army and were now subject to military discipline.

Badoglio Forms Government. Before these sensational developments were made public, Marshal Badoglio reportedly informed the Germans that all Italy must be defended or else Italy would withdraw from the conflict. The Germans then agreed to aid in the defense of the entire peninsula. After these preliminaries the Rome radio announced at 11 p.m. that the King had accepted Mussolini's resignation and designated Badoglio as his successor. A proclamation was read from the King, announcing that he was assuming command of all armed forces, and another from Badoglio stating that he was taking over "the military government of the country with full powers," that the war would go on, and that "attempts to disturb public order will be inexorably hit." He appealed to the nation to tighten ranks "behind the King-Emperor."

On July 26 Badoglio presented his Cabinet list to the King. It contained only two Ministers from Mussolini's last Cabinet—the Under-Secretary of War and the Minister of War Production. But others, such as the new Foreign Minister, Raffaele Guariglia, Mussolini's Ambassador to Turkey, were more or less closely affiliated with the Fascist regime. Immediately afterwards the Premier declared nation-wide martial law and instituted a dusk-to-dawn curfew and other rigid measures against agitation and disorders.

On July 28 the new Cabinet decreed the dissolution of the Fascist party, the Fascist Grand Council, and the special Fascist tribunals for the defense of the state. The elimination of all other Fascist organizations and institutions followed. The whole edifice of fascism collapsed with amazing ease. Before the tide of long-suppressed popular hostility, the organization disappeared like chaff before the wind. Some leaders committed suicide. Others went into hiding or sought to flee into Switzerland. Many were arrested. A small fraction of the movement apparently went underground, but the rank and file repudiated the party which had led Italy into such desperate straits.

Demand for Peace. The population greeted the overthrow of Mussolini with what Badoglio later described as "an indescribable explosion of joy." There was wild rejoicing in the streets of Rome and the other larger cities that continued throughout July 26 and quickly took on the aspect of peace manifestations. In Milan a crowd stormed and burned the newspaper office in which Mussolini began the Fascist movement after World War I, but German troops quickly intervened to restore order. Strikes and disorders spread, especially in

the industrial areas of northern Italy. Demands for peace were coupled with a demand for termination of martial law, the restoration of constitutional government and liberties, and punishment of the responsible leaders of the Fascist regime.

Government's Dilemma. During the tumultuous 50 days that intervened between the overthrow of Mussolini and the capitulation of the Badoglio Government to the Allies, the Government struggled to extricate itself and Italy from an extremely precarious position. German troops were scattered throughout the country. The Gestapo had spread its tentacles widely. The King and Premier Badoglio, in order to forestall a German occupation and the arrest of all Italian governmental leaders, gave repeated assurances that Italy would continue in the war to the end. They publicly rejected the Roosevelt-Churchill demand for unconditional surrender, hoping both to allay German suspicions and obtain better terms from the Allies.

The Allies continued their advance in Sicily, and after waiting a few days for Badoglio to act, addressed repeated warnings to the Italian people by radio that Badoglio's temporizing was assisting the Germans to strengthen their hold on Italy. Prime Minister Churchill on July 27 offered Italy the choice of breaking off the German alliance or being "seared and scarred and blackened" from end to end. On July 29 Gen. Dwight D. Eisenhower, the Allied commander-in-chief, offered the Italians "peace under honorable conditions" and a "mild and beneficent" occupation if they ended their assistance to German forces in Italy. During subsequent days, Allied broadcasts warned that the air offensive against Italy would be reopened soon in earnest unless her Government surrendered. On August 2 Naples and other cities were bombed. Meanwhile the Germans took advantage of the Government's irresolution and inaction to pour additional troops into Italy and to complete preparations to meet both an Allied invasion and Italian capitulation.

The Government's policy puzzled most of the Italian people, who had expected peace to follow immediately after Mussolini's overthrow. Early in August great new peace demonstrations occurred in northern Italy, where thousands of striking workers demanded the ousting of both Badoglio and the King. The Government's efforts to obtain Allied recognition of Rome's status as an open city only added to the resentment of residents of the oft-bombed cities of northern and southern Italy. The rising resistance to the Badoglio regime was reflected in the resignation of the Minister of Interior on August 10 in protest against the continuance of martial law and in preparations by anti-war and pro-democratic elements for a general strike. By the end of August the internal situation in Italy again approached a crisis.

Peace Negotiations. Early in August the Badoglio Government made two separate and secret peace overtures to British officials. They were rejected with the demand for unconditional surrender. Negotiations were opened secretly again on August 15 when an Italian general with full authority from Premier Badoglio arrived in Lisbon. He carried the Italian Government's offer to join the Allies against Germany when the Allied invasion of the mainland began.

At the direction of Roosevelt and Churchill, who were then at Quebec, General Eisenhower sent British and American staff officers to Lisbon to carry on the negotiations on the basis of unconditional surrender. Parleys were continued at Algiers and at Syracuse in Sicily and finally concluded at

the latter spot on the night of September 3 after Eisenhower had given Badoglio 24 hours to agree to all terms or suffer the full weight of Allied air power. (For an official account of these negotiations, see the text of Prime Minister Churchill's speech of September 21 before the British Parliament, published in *The New York Times* of September 22.)

The Armistice. The armistice was signed on the same day the British Eighth Army began the invasion of Calabria. But the Italian capitulation was kept secret at General Eisenhower's insistence and did not go into effect until Eisenhower personally broadcast the announcement on September 8. Stating that hostilities with Italian forces were ended, he declared that "all Italians who now act to help eject the German aggressor from Italian soil will have the assistance and the support of the United Nations."

An hour and a quarter later Premier Badoglio confirmed the armistice over the Rome radio. "The Italian forces," he said, "will therefore cease all acts of hostility against the Anglo-American forces wherever they may be met. They will, however, oppose attack from any other quarter." While the Italian people for the most part went wild with joy at what they conceived to be the end of the war for Italy, Badoglio sent telegrams to Hitler and the chiefs of the other Axis powers explaining that all hope of resistance, much less of victory, had vanished and that to avoid "total ruin" his Government had been obliged to ask for an armistice. This was the first open step in Italy's dramatic turnabout from an ally to a foe of the Reich.

The terms of the armistice, first made public in summary form on September 12, called for: (1) Immediate cessation of hostilities, (2) Italian denial to the Germans, so far as possible, of facilities that might be used against the United Nations, (3) immediate delivery of all United Nations prisoners or internees to the Allies, (4) transfer of the Italian fleet and aircraft to points designated by the Allied commander, (5) Allied requisitioning of Italian merchant shipping, (6) immediate surrender to the Allies of Corsica and all Italian territory, (7) immediate and free Allied use of all airfields and naval ports in Italian territory, with the Italian armed forces guaranteeing their protection until taken over by Allied forces, (8) immediate withdrawal of Italian armed forces from all participation in the war, (9) employment by the Italian Government of all available armed forces to insure prompt and exact compliance with the armistice provisions, (10) Italian acquiescence in an Allied Military Government controlling such parts of Italian territory as the Allied commander might deem necessary, as well as in any other action the Allied commander might consider necessary for the protection and interests of Allied forces and for the prosecution of the war, (11) Italian acceptance of any measures of disarmament, demobilization, and demilitarization imposed by the Allied commander, (12) compliance with "other conditions of a political, economic, and financial nature to be transmitted later," and (13) nonpublication of the conditions of the armistice without prior approval by the Allied commander.

It was stressed by the Allies that in concluding the armistice they had not obligated themselves in any way to maintain Premier Badoglio and King Victor Emmanuel in power. Yet in subsequent months the Anglo-American Governments and military commanders made an obvious effort to strengthen the position and authority of the Badoglio Government as the agency most likely to enlist

Italian support for the United Nations against Germany.

Allied-German Race. General Eisenhower's announcement of the armistice started a furious race between the Allies and the Germans for possession of the territories, bases, arms and supplies, communications and other war facilities formerly under Italian occupation or control. Later the same day a large Anglo-American amphibious force landed on the Salerno beaches just south of Naples, hoping to drive inland and trap the German forces facing the British Eighth Army farther south. British forces were admitted to the Italian naval base of Taranto inside the heel of the Italian boot, and began a drive up the east coast of the peninsula, while other British units advanced from Calabria up the west coast.

However the Germans were prepared for the emergency and reacted vigorously. They attacked and held the invasion force at Salerno until German units in southern Italy could retire. They seized the cities and strategic centers of northern and central Italy, disarmed all Italian troops except those under friendly commanders, and rounded up thousands of suspected enemies among Italian officials and civilians. On September 10 the Germans attacked and seized Rome, from which the King, Premier Badoglio, and some members of the Cabinet and military staffs had fled on September 8 to Allied-held territory in the south of Italy.

Two Italian divisions helped to drive German air squadrons from their bases in Sardinia, and the Italian garrison in Corsica gave some assistance to Allied and guerrilla forces in ousting the Germans from that French possession (see *CORSICA*). But in general Allied appeals for Italian aid in driving the Germans from Italian soil were largely ignored.

It was much the same story in Greece, Yugoslavia, and the Italian Aegean Islands. On September 8 Lieut. Gen. Sir Henry Maitland Wilson, Allied commander in the Middle East, broadcast an order of the day to Italian forces in the Balkans and the Aegean Islands informing them of the armistice. He ordered them to resist all German efforts to disarm them or to take over their positions. Italian ships and aircraft in the region were told to proceed to Allied-held territories.

However the Germans, with the connivance of the principal Italian commanders, succeeded in disarming the Italian forces and seizing the areas under Italian control without undue difficulty. Except for some forces under pro-Axis officers, who rejected the armistice and continued to fight the Allies, most of the Italian units surrendered their arms without resistance. Some units turned over their arms to Greek or Yugoslav guerrillas before surrendering to the Germans, and a few troops such as the Venezia Division joined the guerrillas outright. Only in a few of the less important Aegean islands did the Italians retain control until the arrival of Allied reinforcements. And these islands—Samos, Leros, Kos, and a few others—were impossible to hold against a subsequent German attack due to the failure of the Italians to retain possession of the key island of Rhodes.

Italian Fleet Surrenders. The Allies fared much better in the race for control of the still powerful Italian fleet and for the remnants of the merchant shipping. In response to a message broadcast by Sir Andrew Browne Cunningham, Allied naval commander in the Mediterranean, on September 8 virtually all seaworthy Italian warships left their bases at La Spezia and other Italian-held ports to surrender to the Allies in accordance with the armistice terms. One group of vessels was heavily

attacked by German bombers off the coast of Corsica and the 35,000-ton battleship *Roma* was sunk by a single bomb. But over 80 Italian naval vessels reached Malta and other Allied-held ports, including 5 battleships, 8 cruisers, 27 destroyers, 19 submarines, and most of the other major units of the Italian Navy. Seven other naval vessels took refuge in Spanish ports and were interned. About 80,000 tons of Italian merchant shipping also went over to the Allies, but the Germans seized about 300,000 tons of shipping including the luxury liners *Rex* and *Conte di Savoia*.

Post-armistice Political Events. The foregoing events left Italy in a state approaching political chaos. Bitter factional divisions deepened as the struggle to determine the form and leadership of Italy's postwar government developed. Within the ranks of the former Fascist party, the July split between supporters and opponents of Mussolini and his pro-German policy had left savage animosity. Although the Badoglio Government and the King had abolished the Fascist system, they had been more or less closely linked with Mussolini's Fascist dictatorship for over two decades.

Moreover Badoglio and Victor Emmanuel had aroused the suspicion and hostility of pro-democratic and anti-Fascist elements by their attempts to continue the war on the side of Germany and the imposition of martial law during the 50-day interregnum between the overthrow of Mussolini and the armistice. The King had surrounded himself with army generals, members of the aristocracy, churchmen, and representatives of other groups who were hostile or indifferent to popular government. By switching to the Allied side at the eleventh hour, the King and his followers hoped to enlist Allied support in salvaging the monarchy.

Puppet Fascist Regime. Meanwhile the Germans sought to retain the support of pro-Fascist and anti-Allied Italians by announcing on September 9 that a "Fascist National Government" had been set up in Italy in opposition to the Badoglio Government and was functioning "in the name of Benito Mussolini." An alleged proclamation of this "government" broadcast in Italian from Berlin asserted that "this Badoglio betrayal will not be perpetrated. The Fascist National Government will punish traitors pitilessly."

Mussolini Freed. Mussolini was imprisoned by the Badoglio Government from July 25 to September 12. After being confined in several different prisons, including a villa on the Island of Ponza and the fortress of Maddalena in Sardinia, he was transferred to Gran Sasso, in Abruzzi, near Rome. There German parachute troops, Elite Guards, and Gestapo agents rescued him from Badoglio's jailors by a surprise attack on September 12. This balked Badoglio's promise to deliver the deposed Premier to the Allies and enabled the Germans to use him for their political purposes.

In an order of the day broadcast by a German-controlled radio station in Italy on September 15, Mussolini was stated to have: (1) "again assumed the supreme leadership of fascism in Italy," (2) appointed Alessandro Pavolini as "provisional secretary of the Fascist National party, which from today will be known as the Republican Fascist party," (3) decreed the immediate reinstatement of all officials and officers of the former Fascist Government who were dismissed by Badoglio, (4) decreed the immediate reestablishment of all Fascist party organizations, and ordered them to actively assist German forces "fighting the common enemy on Italian soil" and also to "inflict exemplary punishment on cowards and traitors," and (5) decreed

the reestablishment of the Fascist militia or Black Shirt formations.

In a radio address from an undisclosed place on September 18 Mussolini urged all "loyal Italians" to observe the foregoing orders, and take up arms again on the side of Germany and Japan. He denounced the Badoglio Government for yielding to the "hardest armistice terms known in history," charged the King with preparing and carrying out the July 25 coup against him, and demanded that Victor Emmanuel be called immediately to account. He declared he had been arrested on the steps of the King's private house and spirited away in a Red Cross car.

Republican Fascist Regime. The German radio on September 23 announced the formation by Mussolini of a new Cabinet of 12 members (all Fascists), with Marshal Graziani as Minister of Defense. The new "government" was temporarily established in southern Germany, then moved to Rome, and on October 8 was transferred to a city in northern Italy. Subsequently Graziani and other members of the new regime spoke over German-controlled radio stations. They charged the House of Savoy and Badoglio with dishonor and treachery and sought to rally the Italian people behind the Axis.

Another proclamation by Mussolini broadcast on September 29 announced that he would "exercise the functions of chief of the new Republican Fascist State" pending the convening of a "constitutional national assembly." Meanwhile the puppet regime had been recognized by all of the remaining Axis powers under pressure from Berlin. It proceeded to collaborate with the Germans in conscripting Italian workers for labor service, crushing all opposition elements, punishing those who acclaimed Mussolini's downfall in July, initiating a reign of terror against the Jews, and seeking to recruit Italians to fight alongside the Germans against the Allies.

According to the Berlin radio, the Republican Fascist regime on October 31 demanded the death penalty for the King, Badoglio, the generals and admirals supporting them, and all 19 members of the Fascist Grand Council who voted for Mussolini's ouster. A number of those threatened with death were in German hands at the end of 1943, including Count Ciano and Marshal de Bono. Postponement of their "trial" until early in 1944 was announced December 23.

Opposition in North Italy. All reports from northern Italy during the latter months of the year indicated widespread opposition to German and Republican Fascist rule. This took the form of underground and guerrilla warfare, assassinations, strikes, sabotage, and passive resistance. The Germans and their Fascist collaborators retaliated with wholesale arrests, the taking of hostages, numerous executions, pillaging, and general terrorism. In mid-October numerous Catholic priests were rounded up by the Germans for preaching "anti-German propaganda." On December 22 German authorities published a list of 160 Fascist Republicans and 20 German soldiers killed by anti-Fascists in northern Italy during the preceding week. For this the Germans announced that they had executed 210 hostages and that another 1,590 would be executed unless the attacks stopped.

Badoglio and the Allies. The flight of Premier Badoglio and the King to southern Italy presented the British and American Governments with the same dilemma they had faced at the time of the invasion of French North Africa. They wanted to use Premier Badoglio and the King to enlist the aid of the Italian people against the Germans with-

out committing themselves to the postwar perpetuation of the monarchy. They therefore permitted the establishment of the Badoglio Government in Apulia, permitted Italian armed forces and officials loyal to that Government to retain their arms, positions, and functions in Sardinia and the three Apulian provinces of Brindisi, Bari, and Taranto, and sent an Allied Military Mission to insure the military cooperation of the Badoglio forces. The Allied Military Government (AMG) administered Sicily and the rest of the Allied-occupied territory on the Italian mainland. The political policies followed by the AMG and Allied military commanders in Italy were made subject to the control of the Mediterranean Commission, later transformed into the Advisory Council on Italy in accordance with the decisions of the Moscow Conference (see UNITED NATIONS).

Badoglio Declares War. Allied policy was successful in bringing the Badoglio Government into the war on the side of the United Nations. This was achieved by successive steps, for which German actions in central and northern Italy afforded justification.

On September 11 the King and Badoglio broadcast a call to the Italian people to defend their nation "against German aggression." A proclamation by Premier Badoglio on September 20 went further. It urged the Italian people to take up arms against the Germans in active cooperation with the United Nations. Continued negotiations between Premier Badoglio and Allied representatives achieved the following results. Late in September the Premier agreed to broaden the base of his Government. On September 29 he signed the nonmilitary terms of the armistice, embodied in 40 clauses of an economic, political, and financial nature. Finally, on October 13, he declared war on the Reich in the name of the King "in the face of the repeated and intensified acts of war committed against the Italians by the armed forces of Germany."

The declaration of war was accompanied by a joint statement by President Roosevelt, Prime Minister Churchill, and Premier Stalin accepting "the active cooperation of the Italian nation and armed forces as a co-belligerent in the war against Germany." They acknowledged "the Italian Government's pledge to submit to the will of the Italian people after the Germans have been driven from Italy" and added that "nothing can detract from the absolute and untrammelled right of the people of Italy by constitutional means to decide on the democratic form of government they will eventually have." However they said that Italy's new relationship to the United Nations did not affect the terms of the armistice, which could only be adjusted "in the light of the assistance which the Italian Government may be able to afford to the United Nations' cause."

Allied Control Commission. The first fruit of Italian co-belligerency was General Eisenhower's announcement of November 10 that the Allied Military Mission had been replaced by an Allied Control Commission for Italy. The Control Commission's function was to see that all Italian economic resources and manpower were utilized in the struggle with Germany. Eisenhower's statement added that "in all areas behind the combat zones Allied Military Government of enemy territory will gradually be replaced by Italian administration exercised under supervision of the Control Commission. We look to the Italian Government to broaden its political composition and strengthen its administrative structure, and the transfer from AMG to Italian

administration will keep pace with this development." The Advisory Council for Italy, established in conjunction with the work of the Allied Control Commission, would, the statement said, "deal with day-to-day questions other than military preparations and will make recommendations to coordinate Allied policy with regard to Italy."

Advisory Council Meets. The Advisory Council for Italy held its first meeting in Algiers November 30. It consisted of Harold Macmillan (Britain), René Massigli (French Committee of National Liberation), Robert D. Murphy (United States), and Andrey Y. Vishinsky (U.S.S.R.). Representatives of Greece and Yugoslavia were to be added later.

King Blocks Reorganization. In line with the pledges made to the Allies and to the Italian people upon declaring war on the Reich, Premier Badoglio undertook to reorganize his Government on a broader basis pending the Allied occupation of Rome. During the latter part of October he sought to induce leaders of the various anti-German political groups to enter his Cabinet. He conferred with Count Carlo Sforza, former Italian Foreign Minister, who had just returned to Italy after living in voluntary exile for nearly 15 years, and with leaders of six political parties disbanded by Mussolini, which had united to form a National Liberation Front.

Following these conferences Badoglio informed the King on November 1 that he could not form a representative Government unless the monarch abdicated. The National Liberation Front leaders demanded a republic, but Count Sforza and other liberal leaders indicated that while they would not collaborate with Victor Emmanuel or Crown Prince Humbert, they would accept a regency for the Prince of Naples, Humbert's 6-year-old son, with Badoglio as regent.

The King, however, flatly refused to abdicate and Badoglio declined any part in the move to oust him. As a temporary solution the Premier on November 13 organized a "technical" government of nonparty under-secretaries and experts to carry on the actual business of government. At the same time Badoglio announced that he would resign and retire completely from politics when Rome was liberated and a "new political government formed by the King."

Opposition by the six old-line political parties to the King's participation in the new government to be formed at Rome was the basis of the serious tension that developed in southern Italy during November and December. Badoglio placed the responsibility for his new Cabinet upon the Allies, who were accused by Sforza and the National Liberation Front leaders of maintaining the King in power and protecting the anti-democratic elements in his entourage.

Allied policy had been based upon the subordination of politics until the Germans were ousted from all Italy and the whole Italian people could determine their future form of government. It became increasingly difficult to maintain this policy. Yet the Allies saw that to oust the King would probably impair the cooperation of Italian army and navy officers and other strongly pro-monarchist elements, and possibly prejudice future prospects for a republic. Consequently the Allied Control Commission and AMG contented themselves with pressing the Badoglio regime to carry out a purge of anti-democratic methods and elements, called for under the Declaration on Italy adopted at the Moscow Conference. On December 17 they turned over to Italian civil administration all occupied territory in Italy south of the northern bound-

aries of Salerno, Potenza, and Bari provinces, including Sicily.

Gen. Mario Roatta, Badoglio's Chief of Staff, who was on the Yugoslav war criminal list, was dropped on November 12. His successor, Marshal Giovanni Messe, promised to eliminate incompetent and "politically dangerous" officers from the army. A Socialist, Prof. Guido Pazzi, was named Badoglio's Minister of Information November 25. On November 30 the Cabinet deprived Victor Emmanuel of the titles of King of Albania and Emperor of Ethiopia, bestowed upon him by Mussolini, and announced the inauguration of measures to eliminate Fascist elements from the administration. Units of the Italian army reorganized under Badoglio took over a section of the Allied front in Italy on December 8 and fought well in several engagements.

Meanwhile the political debate between the opponents and supporters of the King in southern Italy became increasingly violent, with both sides protesting against the interference of the Allied Control Commission and AMG. On November 29 the Committee of National Liberation voted non-confidence in the Badoglio Government, called on Victor Emmanuel to abdicate, and demanded that Crown Prince Humbert renounce his rights to the throne. By mid-December the situation had become so explosive that AMG representatives banned a meeting of anti-monarchist political committees scheduled for December 20 in Naples.

See ALBANIA, BULGARIA, CORSICA, GERMANY, GREAT BRITAIN, GREECE, HUNGARY, IRAQ, JAPAN, RUMANIA, SPAIN, TUNISIA, TURKEY, and YUGOSLAVIA under *History*; *BUSINESS REVIEW*; *MUSIC*; *NAVAL PROGRESS*; *REFUGEES*; *SOCIALISM*; *UNITED NATIONS*.

RONALD STUART KAIN.

IVORY COAST. See FRENCH WEST AFRICA.

JACKSON HOLE NATIONAL MONUMENT. See NATIONAL PARKS AND MONUMENTS.

JALUIT. The chief island (169° 42' E. and 5° 48' N.) in the Marshall group of the Japanese Pacific Islands (q.v.). Area, 8 square miles. Civil population (1938), 10,546 (10,038 natives and 504 Japanese). The island was the administrative center of the Marshall Islands and was reported to be strongly fortified. Copra was the principal export.

JAMAICA. A British West Indian colony. Area, 4,450 square miles. Population (Jan. 1, 1942 estimate), 1,241,420, including 19,693 East Indians. Dependencies of Jamaica: Cayman Islands (104 sq. mi.; 6,975 inhabitants), Turks and Caicos Islands (166 sq. mi.; 5,300 inhabitants), Morant Cays, Pedro Cays (Guano Islands). Chief towns: Kingston (capital) and suburbs had 120,000 inhabitants, Spanish Town, Port Antonio, Montego Bay, and Falmouth. Vital statistics (1941): 37,829 births, 17,317 deaths, and 5,612 marriages. Education (1941-42): 667 public elementary schools and 163,803 students enrolled. There are vocational, secondary, and industrial schools, and training colleges for men and women.

Production and Trade. The chief agricultural products included sugar (166,630 long tons, 1941-42), bananas (1,347,324 stems shipped, 1942), coffee, rum, coconuts, pimento, grapefruit, cacao, ginger, oranges, essential oils, tobacco, and logwood. Live-stock (1940-41): 128,270 cattle, 10,390 sheep, 24,312 horses, mules, and donkeys. Trade (1941): imports £6,517,435; exports £3,966,853. The

chief exports were sugar, bananas, rum, pimento, coconuts, ginger, cocoa, and coffee. Foodstuffs, and cotton piece goods were the main imports.

Communications. During the fiscal year ended Mar. 31, 1942, there were 214 miles of railway open to traffic; receipts totaled £298,543. Roads (1940): 6,914 miles. In 1941 there were 1,628 miles of telegraph line and 3,927 miles of telephone line. Air services link Jamaica with Miami (United States), Aruba, Curaçao, Haiti, and Cuba.

Government. Budget (1942-43): revenue £3,718,120; expenditure £4,050,260. Actual (1941-42): revenue £4,167,185; expenditure £3,822,654; public debt £6,533,161. The Government is headed by a governor, assisted by a privy council. There is a legislative council comprising 30 members (the Governor as president, 5 official, 10 nominated, and 14 elected). A census of the population was to be taken in order to facilitate certain constitutional changes recommended by the West India Royal Commission. For particulars of the military and naval bases leased to the United States, see the 1942 YEAR BOOK, p. 302. Captain General and Governor in Chief, Sir John Huggins (appointed July 6, 1943).

History. On Feb. 10, 1943, the British Secretary of State for Colonies announced his acceptance of most of the proposals for constitutional reform submitted to him on behalf of the people of Jamaica. The proposals accepted called for a bicameral legislature, consisting of a House of Assembly elected on a universal suffrage basis and a nominated Legislative Council; an Executive Committee of 10 members (five elected by the House of Assembly and five nominated by the Governor), presided over by the Governor; and the election by the two legislative bodies of the Speaker of the House and President of the Legislative Council respectively. The Colonial Secretary proposed that this new Constitution be tried out for a full electoral period of five years. This offer was well received in Jamaica, but the new Constitution had not been proclaimed by the end of the year.

In connection with its efforts to reduce unemployment, the Government early in April concluded an agreement with Washington officials for the temporary importation of up to 10,000 Jamaican agricultural workers into the United States to relieve farm-labor shortages in certain areas. The agreement was negotiated under the auspices of the Anglo-American Caribbean Commission. It provided for the return of the Jamaicans to the island upon expiration of their work contracts.

JAMES FOUNDATION. See PHILANTHROPY.

JAN MAYEN. An arctic island between Greenland and northern Norway, 220 miles north-northeast of Iceland. Area, 144 square miles. It is mountainous, Mt. Beerenberg in the north being 8,350 feet high. A meteorological station was established on the island by Norwegians in 1921. The island was formally annexed by Norway on Feb. 27, 1930.

JAPAN. A Far Eastern empire, comprising (1) Japan proper, or the five main islands of Honshu, Kyushu, Shikoku, Hokkaido, and Ryukyu, with some 600 smaller islands; (2) Formosa (Taiwan); (3) Korea (Chosen); (4) Karafuto (southern Sakhalin); and (5) Pescadores (Bokoto) Islands. In addition Japan controlled the leased territory of Kwantung and the South Manchuria Railway Zone in Manchuria and mandated territories (Marianne, Caroline, and Marshall Islands) in the North Pacific. Capital, Tokyo; Emperor, Hirohito,

who ascended the throne Dec. 25, 1926. See separate articles on FORMOSA, KOREA, KARAFUTO, JAPANESE PACIFIC ISLANDS, KWANTUNG.

Area and Population. The area and population of the empire at the censuses of 1935 and Oct. 1, 1940, are shown in the accompanying table.

JAPANESE EMPIRE: AREA AND POPULATION

	Area sq. miles	Population, 1935 census	Population, 1940 census
Japan proper.....	147,593	69,254,148	73,114,308
Korea.....	85,228	22,899,038	24,326,327
Formosa ^a	13,889	5,212,426	5,872,084
Karafuto.....	13,934	331,943	414,891
Kwantung ^b	1,438	1,656,726	1,367,334
Mandated Pacific Is....	830	102,537	131,157
Japanese Empire....	262,912	99,456,813	105,226,101

^a Including Pescadores (Bokoto) Islands; area, 49 square miles. ^b Including South Manchuria Railway Zone.

According to the 1940 census, there were in the empire 52,896,862 males and 52,329,239 females. The population of Japan proper increased 5.6 per cent during the inter-censal period 1935-40 as against 7.5 per cent during 1930-35. The increase for the empire as a whole was 6.4 per cent for 1935-40 and 8.2 per cent for 1930-35.

Living births in 1941 were reported at 2,210,000 (29.9 per 1,000); deaths, 1,140,000 (15.4 per 1,000). In 1939 the birth rate was 26.3 per 1,000 and the death rate 17.6. The populations of the chief cities at the 1940 census were: Tokyo, 7,778,804; Osaka, 3,252,340; Nagoya, 1,328,084; Kyoto, 1,089,726; Yokohama, 968,091; Kobe, 967,234; Hiroshima, 843,968; Fukuoka, 306,763; Kawasaki, 300,777; Yawata, 261,309.

Recent Conquests. Beginning a new period of expansion by its invasion of Manchuria in 1931, the Japanese armed forces had brought the territories listed in the accompanying table under their occupation and control by June 30, 1942. See separate article on each territory.

NEWLY CONQUERED TERRITORIES

Territory	Date of occupation	Area, sq. miles	Estimated population
Manchoukuo ^a	1931-33	503,000	39,454,000
Inner Mongolia ^b	1937	200,000	5,000,000
China proper.....	1937-42	1,885,257 ^c	200,000,000 ^d
French Indo-China.....	1940-41 ^e	286,408 ^f	23,700,000 ^f
Thailand.....	Dec. 8, 1941	200,148 ^g	15,718,000 ^g
Guam.....	Dec. 12, 1941	225	23,400
Wake Island.....	Dec. 22, 1941	4	1,000
Hong Kong.....	Dec. 25, 1941	391	1,050,000
British Malaya.....	Dec. 8, 1941- Feb. 15, 1942	132,898 ^h	6,386,000 ^h
Netherlands East Indies.....	Jan.-Mar., 1942	735,268	70,476,000
Philippines.....	Dec. 8, 1941- May 7, 1942	114,400	16,772,000
Burma.....	Jan.-May, 1942	261,610	16,824,000
Andaman Islands ⁱ	Mar. 23, 1942	3,143	29,500
New Guinea ^j	Jan.-Mar., 1942	93,000	632,000
Total.....		4,415,752	396,065,900 ^k

^a Comprising Manchuria, Jehol Province, and part of Chahar. ^b Puppet state of Meng Chiang. ^c Estimate as of March, 1942. ^d The original population was estimated at 150,000,000 to 200,000,000. ^e Agreements of Sept. 22, 1940, and July 29, 1941. ^f Not taking into account some 26,664 square miles ceded to Thailand by French Indo-China Mar. 11, 1941. ^g Including British North Borneo, Brunei, and Sarawak. ^h Including Nicobar Islands. ⁱ Territory of New Guinea which comprises Northeast New Guinea, the Bismarck Archipelago, and the northern Solomon Islands. ^j Not including uninhabited islands in the western Aleutians occupied by Japan in June, 1942. ^k Including the population of occupied China.

Education and Religion. Illiteracy is confined largely to people over 50 years of age. The school enrollment in 1937 was: Kindergarten, 152,627; elementary, 11,566,912; secondary, 842,792; uni-

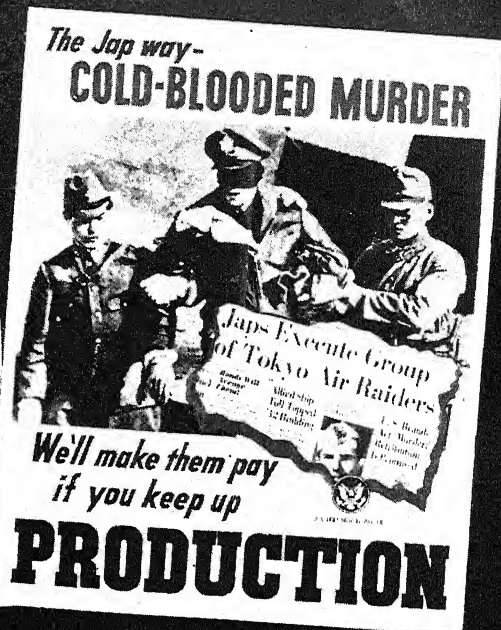
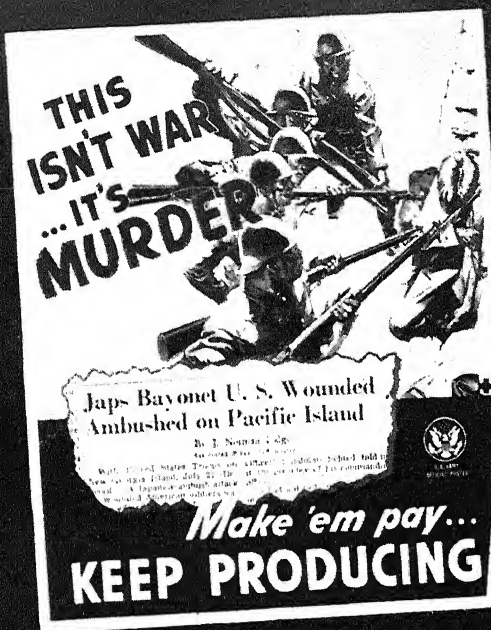
versities and colleges, 72,195; special and technical schools, 531,807; preparatory technical schools, 1,964,599. Shintoism, with 13 different sects, and Buddhism, with 12 sects, are the principal religions. In 1940 all religious groups were brought under State control and the Christian denominations were merged in a single Japanese Christian Church.

Production. Manufacturing normally accounts for about 32.7 per cent of the national income (estimated at 24,519,036,000 yen in 1939), commerce for 25.4 per cent, and agriculture for 17.7 per cent. Agriculture, however, supports nearly half the population of Japan proper. Estimated production of the principal crops in Japan proper was (in metric tons): Rice, 11,298,000 in 1940-41 (335,000,000 bu. in 1941-42); wheat, 1,568,580 in 1941; barley, 1,687,300 in 1940; potatoes, 1,848,100 in 1938; beet sugar, 27,000 in 1940-41; cane sugar, 90,000 in 1940-41; tobacco, 87,054 in 1940; tea, 57,500 in 1939; rapeseed, 108,800 in 1940; soybeans, 348,300 in 1938; raw silk, 45,000 in 1940. The value of fish and other raw marine products in 1938 was 248,895,000 yen.

The world's leading exporter of cotton piece goods, Japan in 1940 exported 1,800,000,000 sq. yd. of cotton cloth valued at 378,000,000 yen, the lowest volume since 1931. Output of rayon in 1940 was 102,060 metric tons; cement, 4,250,000 metric tons (Japanese Empire); newsprint, 407,632 short tons; civilian passenger cars, trucks and buses, 23,525 vehicles (including 23,000 trucks). Mineral and metallurgical production was (in metric tons, except as stated): Steel, estimated at 7,000,000 to 8,000,000 tons annually; pig iron, about 3,000,000 in 1939; coal, 53,000,000 (including Korea and Formosa) in 1938; petroleum (crude and synthetic), 8,200,000 bbl. in 1941; copper (smelter), 104,000 in 1939; magnesium, 4,000 in 1940; aluminum, 35,000 in 1940; iron ore, 470,000 in 1936; lead (smelter), 12,000 in 1939; zinc (smelter), 55,000 in 1939; gold, 26,000 kilograms in 1939. Electric power capacity in 1941 was estimated at 8 million kilowatts, of which 85 per cent was used in industry. The annual production capacity of Japanese merchant shipping yards was estimated at 400,000 to 500,000 tons. Besides war materials and heavy and light industrial equipment, Japan produces a wide variety of manufactures.

Foreign Trade. For the calendar year 1940, merchandise imports of the Japanese Empire totaled 3,709,000,000 yen; exports, 3,972,000,000 yen. Imports from foreign-currency countries for that year were unofficially estimated at 2,700,000,000 yen; exports, 1,800,000,000. Before Japan entered the World War, trade was carried on mainly with the United States, Manchukuo, China, British India, the Netherlands Indies, and Great Britain, in the order named. For the principal import and export items, in 1939, see 1942 YEAR BOOK.

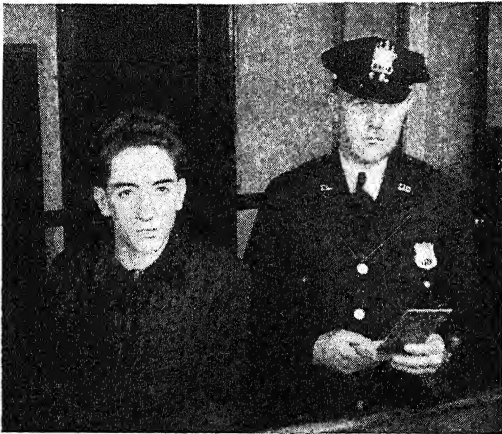
Finance. The Japanese fiscal year ends March 31. Budgets for the years 1937-38 and for 1940-41 to 1942-43 inclusive are given in the 1943 YEAR BOOK, p. 344. The budget for 1943-44 balanced at about 40 billion yen. Receipts were estimated as follows (in billions of yen): Taxes, 10.3; bond issues, 20.3; government monopolies, forced loans, etc., 9.4. Finance Minister Kaya stated that 3.3 billions of "loans" were to be apportioned among the occupied territories. Of the total expenditures, about 32.2 billions were for defense (27 billions in the Temporary War Special Account and 5.2 billions representing defense items in the Gen-



Press Association, Inc.

REPORTS OF JAPANESE ATROCITIES ARE PROVED

Although few were skeptical of earlier reports of the inhuman treatment of prisoners of war, the last doubt was removed when the reports of Lt. Col. William Dyess, Commander Melvyn McCoy, and Lt. Col. S. M. Melnik, who had escaped from prison camps in the Philippines, were made public. The photograph shows them with Gen. Douglas MacArthur (second from right) shortly after they reached Australia. Top: U.S. Army Official Posters based on the reports.



THE PROBLEM OF JUVENILE DELINQUENCY
As depicted in March of Time's *Youth in Crisis*



Wartime conditions have placed a heavy strain upon communities. In place of non-supervised social gatherings in public places and resort to the juvenile courts, the Children's Bureau encourages programs of recreation and informal educational activities.

eral Account). Nonmilitary expenditures were estimated at 7.8 billions. The war budget exceeded 80 per cent of the total expenditures and was about 64 per cent of Japan's national income.

The Japanese public debt increased from 10,578,000,000 yen in July, 1937, to 52,495,000,000 yen on Dec. 31, 1942 (internal, 51,275,000,000; external, 1,220,000,000). The average exchange value of the yen was \$0.2344 for 1940 and the first seven months of 1941. It rose to about \$0.27 just prior to Japan's attack upon the United States and Great Britain on Dec. 7-8, 1941.

Transportation. There were 11,144 miles of State and 4,240 miles of private railway lines in 1938, 591,766 miles of roads in 1940, and 9,598 miles of air routes in August, 1939. The new undersea railway tunnel from Shimonoseki, on the Japanese mainland, to Moji, on the island of Kyushu, was opened to freight traffic in June, 1942. On July 1, 1939, Japan had 2,337 merchant steamers of 5,629,845 gross tons. Extensive improvements to the amalgamated Tokyo-Yokohama harbor (renamed Keishin Port) were completed in 1941.

Government. The parliamentary system of government established under the Constitution of Feb. 11, 1889 (see 1942 YEAR BOOK, p. 303) fell increasingly under the control of Japanese militarist-Fascist elements after the conquest of Manchuria in 1931. Beginning in 1940, a totalitarian, corporative state was superimposed upon the old constitutional system by Premier Prince Konoye, the announced aim being state control of all economic, political, and cultural activities. The first step was the "voluntary" dissolution of the old political parties, some of them acting under strong military pressure. A new political agency, known as the Imperial Rule Assistance Association or League for Support of the Throne, was then created by the army leaders and government to function as the instrument of the new totalitarian principles. It consisted of an Executive Council to "convey the will and ideas of those who govern to those who are governed," and a Central Cooperative Council, to "convey the will and ideas of those who are governed to those who govern." Members of both Councils were appointed by the Premier, one-half of the appointees to the Central Cooperative Council being chosen from names submitted by prefectural branches of the Imperial Rule Assistance Association. Branches of the Association were formed in every town and village, with all leaders appointed from above. In 1942 the Association entered candidates in the elections to the Diet and emerged as the organ of a one-party state (see 1943 YEAR BOOK, pp. 347-8). A Supreme Economic Council and a Supreme Cultural Council were appointed in 1940 to supervise economic and cultural affairs.

The Government assumed most of the aspects of an open military dictatorship with the formation of the Tojo Ministry on Oct. 18, 1941. Contrary to statutory law, Gen. Hideki Tojo remained in active military service while concentrating in his hands the powers of Premier, War Minister, and (temporarily) Home Minister, the latter office controlling the police. The administration of Korea, Formosa, and Karafuto was unified with that of Japan proper in October, 1942, and placed under the jurisdiction of the Home Ministry.

Japan signed the Anti-Comintern Pact with Germany Nov. 25, 1936, and adhered to the Italo-German military alliance Sept. 27, 1940 (see AXIS POWERS). After signing a nonaggression pact with the Soviet Union on Apr. 13, 1941, Japan attacked the United States and the British

Empire without warning on Dec. 7, 1941. For the ensuing declarations of war against Japan, see table under WORLD WAR. For 1943 developments, see below.

HISTORY

Mental Outlook. The ebullient confidence which prevailed in Japan following the phenomenal victories of her armed forces in 1941-42 gave way in 1943 to a feeling of apprehension on the part of Japan's leaders as to what the future had in store for their quickly-acquired, over-expanded empire. The significant change which took place in Japan's mental outlook appeared to be the outstanding development in the situation in the Pacific in 1943.

The resolution adopted at the conference of President Roosevelt, Prime Minister Churchill, and Generalissimo Chiang Kai-shek at Cairo on December 1 was the first move on the part of the United Nations to counteract Japanese "thought warfare," or propaganda among oriental peoples designed to discredit the white man and his works in Asia. According to the resolution Manchuria and Formosa were to be restored to China, Korea was to regain its national independence, and Japan was to be stripped of all other territories acquired by force.

Aside from inhuman treatment accorded to interned American, British, and other war prisoners, Japanese propaganda included the promise of "independence" within the Japanese "co-prosperity" system to all of the lands formerly under occidental control, including the Philippines, Malaya, Burma, and Netherlands East Indies. The Japanese also created a puppet government for India, which had its base in Burma.

The restoration of China's territorial and administrative status was expected to encourage the Chinese to assume a position of democratic leadership in Asia which would prevent the development in the future of another military-dominated Japanese empire.

Offense to Defense. Although the Anglo-American forces were still battling at the outer rim of Japan's defenses, sufficient had happened militarily to cause the Japanese to abandon their original plan of carrying the war into Britain's colonial empire in Australia and India and America's northwestern territory of Alaska. In place of these grandiose plans, Japan was forced to adopt a program of defense designed to hold the major portion of the gains she acquired in the first six months of the war. Japan's defense program included the intense exploitation of occupied territories and the transfer of vital industries from the industrial centers of Japan proper to the continent where the Japanese hoped they might escape bombing raids on Japan's industrial centers. The Japanese also hoped that the decentralization of their industries would facilitate transport to her various fighting fronts, particularly on the continent. An extraordinary session of the Diet in mid-June, 1943, authorized a bond issue of 21,860,000,000 yen, which included the sum of 3,519,000,000 yen for the construction of highways and 17,163,000,000 yen for special military emergency measures. It was thought that much of this financial outlay was for the purpose of expediting the transfer of war industries to the Continent and the linking up of transportation systems, including an all-land rail line from Mukden, Manchuria, to Singapore, in order to circumvent American submarines which had exacted heavy toll of Japan's ocean shipping. The Japanese also worked strenuously

to establish land communication across the Malay Peninsula between Indo-China and Thailand and Burma where major military activities were in prospect.

Allied forces made important gains in the Southwest Pacific during 1943 and American forces achieved vitally important victories in the Gilbert Islands, but the Japanese still held the important colonial territories of America, Great Britain, and the Netherlands which they overran at the beginning of the war. These included Hong Kong, Wake, Guam, Sarawak, Brunei, British North Borneo, British Malaya, Netherlands East Indies, the Philippines, Burma, part of the north coast of New Guinea, and a portion of the British Solomon Islands, as well as Portuguese Timor which the Japanese seized despite the fact that Portugal was still a neutral. The territories which Japan seized in the region of the South Seas had an area of 1,587,500 square miles with a population of approximately 141,000,000.

Within these territories the Japanese found resources for which they hungered a half century in connection with their plans for building up a powerful oriental empire leading ultimately to a struggle for world domination. Among the resources which the Japanese seized and were strenuously endeavoring to exploit were rubber, tin, mercury, zinc, copper, petroleum, gold, iron, coal, antimony, manganese, aluminum, and the immensely valuable sources of supply of vegetable oils. Japan's seizure of rubber in British Malaya and Netherlands Indies embraced a large percentage of the world's sources of supply of the natural product. Before the Japanese occupation British Malaya had an annual productive capacity of 480,000 metric tons of raw rubber, 80,000 tons of tin, and approximately 1,500,000 tons of iron ore. In the Netherlands Indies and British Borneo the Japanese seized oil fields that had produced 7,500,000 metric tons of petroleum and plantations which had produced 500,000 tons of rubber annually. The extent to which Japan was able to develop these resources was not known, but it was thought they were severely handicapped by shortage of shipping and lack of mechanical facilities. In the Philippines the Japanese acquired gold mines and iron supplies of immense value and the sources of supply of the even more valuable products of the cocoa palm.

Cotton Lacking. One raw product, however, for which the Japanese were almost entirely dependent on the West—cotton—they had not been able to develop to any appreciable extent in any of the territories they had seized. They attempted to make up for the large supplies they formerly obtained in the United States, South America, Egypt, and India by forcing the natives in the Philippines, Burma, and Netherlands Indies to cease production of their normal crops of rice and convert their fields to cotton. This resulted in a general unsettlement of the domestic economies of the countries affected. Japan's desperate need for cotton was indicated by the enforcement of regulations in the Netherlands Indies prohibiting the natives from purchasing Japanese cotton cloth unless they turned in a specified quantity of raw cotton. A somewhat similar regulation was enforced in the Philippines.

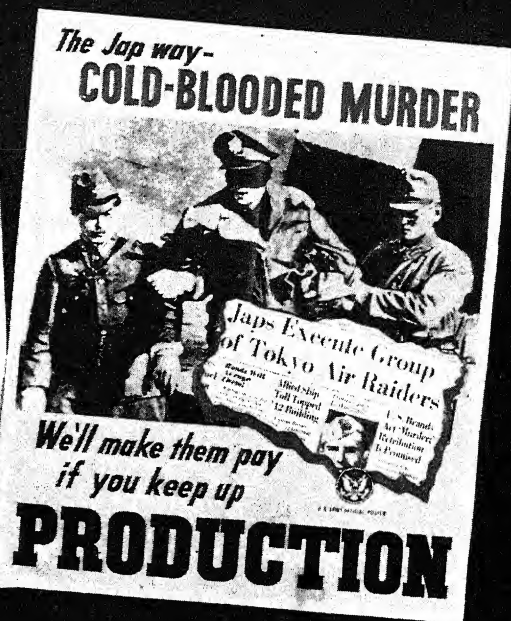
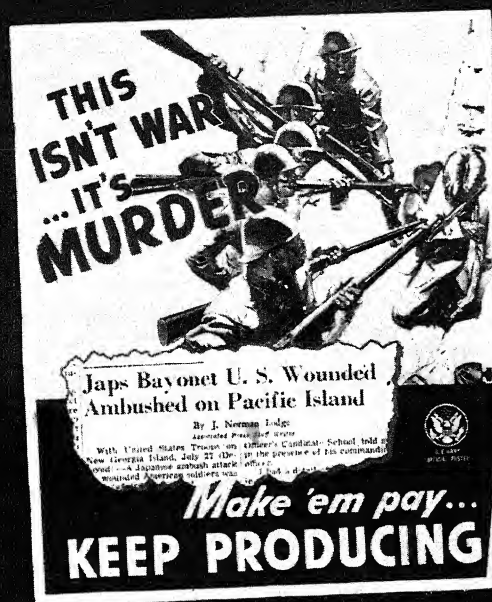
The five-year cotton production plan enforced in the Philippines provided for increasing the area devoted to cotton from 5,000 acres in 1941 to 500,000 acres by 1946. As there was no market in Japan for sugar, a chief Philippine product, it caused a serious unsettlement of Philippine domes-

tic economy and further impoverishment of the people. This was evidenced in the great influx of people from the rural areas into Manila, the population of which had doubled since the Japanese occupation. The Japanese also announced a cotton-conversion plan for Thailand which involved the changing over of 1,000,000 acres of rice lands.

Co-Prosperity. Japan's activities in the field of economics have been part of a daring program designated by the general term "Asiatic Co-Prosperity," the central motive being to induce the masses of Asia to discontinue production of raw materials which they previously produced for sale to the industrialized West and concentrate on the production of articles needed by Japan's industries. In this way the Japanese hoped to supplant the West as the supplier of manufactured goods to Asia. Although Japan's industries had enjoyed a phenomenal expansion in the preceding quarter century, the military and industrial leaders of the country could not wait and hoped by military means to speed up their program of economic domination. The Japanese planned in this manner to eliminate occidental influence from densely populated oriental countries which previously had their economy geared to industrialized Europe and the United States. The Japanese thus became able, temporarily at least, through their naval blockade of oriental sources of supply to dislocate occidental economic systems and hamper military retaliation which they knew would be forthcoming. The Japanese naturally hoped that their development program and defense measures would be sufficiently advanced to withstand the assaults of the West which would necessarily be delayed by the war in Europe.

Pacific Island Bases. Japan's defense strategy was largely based on her possession of well-placed island bases, some of which previously had been fully or partially developed by western genius. Such bases included Singapore, Manila Bay, Burma, Rabaul, Guam, Wake, and Truk Island which has been described as Japan's Pearl Harbor. Guam and Wake were formerly American possessions. Truk and the bases in the Marshall and Gilbert Islands, and Saipan in the Marianas were seized by Japan from Germany at the beginning of World War I in 1914. Americans might have had these islands, originally owned by Spain, when we acquired the Philippines in 1898, but we spurned them as of no importance. Spain then sold them to Germany. Japan was given the islands under the mandate system at the Paris Conference and agreed not to fortify them. The non-fortification agreement was further confirmed at the Washington Arms Limitation Conference in 1922 when the United States and Great Britain also agreed not to further strengthen their fortifications in the region of the Central and South Pacific. Anglo-American bases of potential strength upon which considerable work had already been done included British Hong Kong, American Guam, Dutch Harbor of the Aleutians, and the Philippines.

But while the Americans and British observed their part of the agreement, this was not true of the Japanese who proceeded at once to develop air and submarine bases throughout their newly acquired island empire. American missionaries who previously worked among the native islanders were expelled and American naval authorities were prevented from making inspection trips. The difficulty which the Anglo-Americans have experienced in breaking through Japan's outer ring of fortifications in the Pacific has been due largely



Press Association, Inc.

REPORTS OF JAPANESE ATROCITIES ARE PROVED

Although few were skeptical of earlier reports of the inhuman treatment of prisoners of war, the last doubt was removed when the reports of Lt. Col. William Dyess, Commander Melvyn McCoy, and Lt. Col. S. M. Melnik, who had escaped from prison camps in the Philippines, were made public. The photograph shows them with Gen. Douglas MacArthur (second from right) shortly after they reached Australia. Top: U.S. Army Official Posters based on the reports.



THE PROBLEM OF JUVENILE DELINQUENCY

As depicted in March of Time's *Youth in Crisis*



Wartime conditions have placed a heavy strain upon communities. In place of non-supervised social gatherings in public places and resort to the juvenile courts, the Children's Bureau encourages programs of recreation and informal educational activities.

to the fact that the Japanese had practically 25 years in which to carry out their defense program while the other nations were not only prevented from matching the Japanese program, but actually reduced fortifications which had already been developed prior to 1922. Since occidental prestige in Asia was largely based upon superior military, particularly naval power, Japan's defeat of these forces in the brief period of about six months resulted in a serious loss of prestige on the part of the westerner among oriental races everywhere.

Prisoners of War. While both the United States and Great Britain by the end of 1943 had recovered from the naval losses they suffered at the opening of the war in the Pacific, they had not succeeded in obtaining the release of thousands of occidental prisoners, both civilians and servicemen, who were captured when the Japanese overran the Far East. These prisoners of war included approximately 64,000 British, Australian, and Canadian soldiers, 25,000 Americans, 24,000 Netherlands, and some 185,000 Filipinos, Indonesians, Burmese, and others. A Japanese broadcast early in the year by Lieut. Gen. Fumis Oyama, Chief of the Bureau of Judicial Affairs of the War Ministry, claimed that Japan held approximately 300,000 war prisoners, including 118,000 white troops—British, Americans, Netherlands, Australians, and Canadians. These war prisoners for the most part were held in insanitary concentration camps where insufficient food and almost total lack of medical care caused large numbers of deaths from disease and malnutrition. The U.S. War and Navy Departments, on Jan. 28, 1944, released statements by three officers who had escaped from the Philippines. The statements told of the deaths by murder, torture, starvation, denial of medical supplies, and neglect of several thousands of American and Filipino prisoners who had surrendered to the Japanese at Bataan and Corregidor. The Japanese had previously admitted that some 300 American soldiers died of neglected wounds after the fall of Bataan and Corregidor.

The number of American civilians repatriated up to Dec. 31, 1943, was only 3,000, which figure included a considerable number of Canadians and South Americans. These civilians, repatriated on the neutral Swedish steamer *Gripsholm*, included persons who were engaged in business, missionary, and other professional activities, chiefly in Japan, Manchuria, Korea, China, and the Philippines. Aside from approximately 11,000 American troops held prisoners in the Philippines and some 2,000 at Shanghai, the Japanese still were holding between 5,000 and 6,000 American civilians, chiefly in China and the Philippine Islands. Several hundred other American civilians are also held prisoners in Malaya and the Netherlands East Indies but little was known of their condition. The exchanges of prisoners were effected at the little Portuguese ports of Lourenço Marques, East Africa, and Mormugão on the west coast of India. The British and American Governments both complained at the failure of the Japanese to issue lists of Americans, Dutch, and British war prisoners held in concentration camps in Malaya, Burma and Netherlands Indies, where there had been disturbing rumors regarding war prisoners being forced to work in labor gangs under inhuman conditions, resulting in large numbers of deaths.

The weakness of the Allied position on the question of exchanging prisoners was due to the lack of Japanese military prisoners in Anglo-American hands. Japanese casualties in the earlier phases of the war were unbelievably small, only 29,894, in-

cluding 9,174 killed, according to Japanese statements. The Japanese also seized vast stores of arms, munitions, and civilian goods in acquired territories.

Maritime Losses. Japan's shift from offensive to defensive strategy was made necessary by serious reverses suffered in the battles of the Coral Sea, Midway, New Guinea, the Solomons, Aleutians and Gilberts, all of which took place in the last three quarters of 1942 and in 1943 (see WORLD WAR). The Japanese not only suffered serious losses to their fleet and air force in these engagements but American submarines operating in Far Eastern waters sank well over a million and a half tons of Japanese merchant shipping. According to Secretary of the Navy Frank Knox, Japan's merchant shipping which amounted to about 6,300,000 tons prior to the attack on Pearl Harbor, was reduced to well below 5,000,000 tons. United States sinkings of Japanese tonnage greatly exceeded Japan's replacement capacity, particularly as it was no longer possible for Japan to augment her cargo space by seizures from other nations such as was possible in the early months of the war. There was, however, a noticeable increase in Japan's construction of small wooden ships for use in inter-island communications.

Japan's large fishing fleet, which was used so extensively in landing operations, was also greatly reduced. Reports from Far Eastern sources indicated that Japan was concentrating on the construction of wooden barges using a minimum of steel. Since Japan's island empire extends from Paramushiro in the northern Kurile group of islands to the Netherlands East Indies, a distance of 10,000 miles, her problem of maintaining communications was a monumental one. The Japanese attempted to relieve their land communication problem by the hurried construction of rail lines or motor roads linking up the various native railway and road systems along the coast of Asia which were already in operation at the time of the Japanese occupation. Japan's vital need of land communications to link up and consolidate her territorial holdings on the continent explained her 1943 military campaigns in the Central Chinese provinces, where the Japanese strove desperately to eliminate Chinese forces sitting astride the north and south rail lines connecting North and Central China with Canton and Hong Kong.

Japanese apprehension regarding the future, aside from actual naval and air reverses, was due to the fruition of America's gigantic naval construction program, which resulted in the development within the brief period of two years of the world's most powerful naval armada. Thus, while the Japanese were unable to replenish their losses, they observed that the United States on the other hand was able to completely outdistance her enemy to such an extent as to almost baffle the imagination. As a result the Japanese steadily avoided battle with their main fleet and only ventured to risk the loss of smaller forces necessary for convoys to replenish garrisons in the Southwest Pacific.

Dictatorship Strengthened. Japan's apprehension regarding America's growing economic and naval power was also indicated in developments on the Japanese home front. These developments took the form of warnings to the Japanese people by their leaders regarding critical times to come, and a further concentration of power in the hands of the ruling military clique headed by Premier Gen. Hideki Tojo. Japan had gone on a totalitarian war footing probably more completely than any other nation with the exception of Russia. Men, women, and school children have been pressed into the service of the state to perform allotted tasks. On

October 12 the Cabinet ordered a drastic curtailment of school enrollment in the interest of more national defense training. High school enrollment for 1944 was ordered reduced to one-third and college enrollment to one-half of that which previously prevailed. Men and boys between 14 and 40 years of age were obliged to serve in the armed forces or essential war industries. Women were directed to take their places in civilian pursuits and lighter war industries. Students who heretofore had been exempted from military service were now to become part of the military machine.

Puppet Mobilization. Japan also ordered a mobilization of all young men in her "southern regions" including Burma, Malaya, Sumatra, Java, Borneo, and the Philippines. Military schools for the training of officers and men were opened in Manila, Singapore, Kuala Lumpur, Mandalay, Medan (Sumatra), Bandoeng, and Batavia. The Japanese also legalized enlistment in the Japanese Army of large numbers of Koreans and Formosans, and there was serious unrest in Manchuria resulting from the drafting of young Manchurians for service in the Japanese Army. A report by the Netherlands East Indian Information Service said that Japanese propaganda circulated in connection with the recruiting of troops in the "southern regions" stated that the purpose was to wage major war against the white race. It was stated that the Japanese were developing self-contained defense units in these regions "with the object of carrying on a hundred-year war." As an offset to these developments, there were reports from American missionaries returning to the United States from posts along the Central China coast that puppet Chinese soldiers, trained by the Japanese on behalf of the controlled Wang Ching-wei government at Nanking, had gone over to the Nationalist Chinese Government headed by Generalissimo Chiang Kai-shek at Chungking.

Thailand Build-up. Japan's defense measures in the so-called "southern regions" were also designed to maintain political control over oriental peoples as well as the "white imperialists." Most significant of these moves was the building up of the territorial and military strength of Thailand, formerly Siam. The Japanese entered into a 10-year secret military agreement with Siam long before Pearl Harbor. Under this agreement the Japanese assumed complete control of the development and disposition of the Siamese fleet and the training and equipment of the Siamese army and air force. Under the naval agreement the Siamese bound themselves to send all naval craft to Japanese shipyards annually for overhauling and repairs.

The Japan-Thailand agreement was elaborated in 1942 and 1943 by the cession to Thailand of large sections of territory belonging to neighboring countries or dependencies of European nations. On Mar. 11, 1941, the Japanese handed over to Siam 26,664 square miles of territory belonging to French Indo-China and on Aug. 20, 1943, Japan ceded 15,388 square miles of Burmese territory with a population of about 230,000 and 16,000 square miles of British-Malayan territory with a population of about 1,000,000 people to Siam. The treaty confirming these significant transfers of territory was signed at Bangkok by the Siamese Premier, Field Marshal Luang Pibul Songgram, and the Japanese Ambassador, Teiji Tsubokumi. The Japanese claimed that both France and Britain had forced Siam to cede these territories at an earlier date in exchange for the relinquishment of extraterritorial rights previously held by France and Britain in Siam. Japan's intentions apparently were

to create a powerful puppet state in Malaya, securely bound to Japan by military treaties, which would be able to over-shadow possible future American assistance to an independent Philippines or possible similar British developments in Burma and India and Netherlands activities in the East Indies.

Aside from these activities the Japanese also promised independence under Japanese "Co-Prosperity" guidance to India, Burma, the Netherlands Indies, and the Philippines. Large numbers of young men from the Philippines, Burma, and the Netherlands Indies were taken to Japan for the purpose of impregnating them with Japanese ideas, which largely centered about the elimination of the white man and his works from Asia. The puppet Indian Government which the Japanese set up in Burma was headed by Subhas Chandra Bose, Indian revolutionist, who had resided in Japan for some 20 years. He was generally regarded as a Japanese hireling.

Air-Raid Fears. Fear of further American air raids on Japan proper caused Premier Tojo to announce plans for the total evacuation of Tokyo. The Japanese did not intend to be caught unaware as they were on Apr. 18, 1942, when Col. James H. Doolittle's raiders dropped bombs on Tokyo, Yokohama, Kobe, and Nagoya, causing widespread alarm and considerable damage. The surprise on that occasion was so complete and the confusion so extended that many home defense commanders were court-martialed or committed harakiri. Several of the American aviators who were captured after forced landings in China, were court-martialed and executed because of their "inhuman acts."

A further significant development on the Japanese home front in the latter part of 1943 took the form of broadcasts of exaggerated reports of losses inflicted on the American naval forces by the Japanese naval and air forces, particularly on the Solomon Islands front. It was thought that these broadcasts of exaggerated claims and obviously false information was for the double purpose of counteracting reports of the Anglo-American-Russian conversations at Moscow, which had been circulated in Japan, and also for the purpose of quieting native unrest among Japan's subject peoples caused by Anglo-American bombings of Japanese military supply bases in China, Hong Kong, Indo-China, Thailand, Netherlands East Indies, and Burma.

Totalitarianism. The military dictatorship which was initiated on Oct. 18, 1941, when Gen. Hideki Tojo assumed office as Premier, was strengthened by further concentration of administrative power in the hands of Premier Tojo and the concentration of political power in the totalitarian Imperial Rule Assistance Association, which supplanted Japan's two leading political parties. Although contrary to statutory law, Premier Tojo retained his rank as a general in active military service. In addition to his power as Premier, he also has concentrated in his hands the posts of War Minister and Home Minister, the latter office controlling the powerful political police.

Premier Tojo announced in October, 1943, additional Cabinet changes and amalgamations which further concentrated power in his hands. The old Cabinet Planning Board or "Inner Cabinet" was abolished and in its place was created a new and powerful Ministry of Munitions in which was concentrated all production and mobilization agencies. A new Agriculture and Forestry Ministry was also created to combine the Agriculture and Forestry

Ministry and the Ministry of Commerce and Industry. In addition a new Transportation and Communications Ministry was created to combine the Communications and Railway Ministries. Premier Tojo had already taken over as a "temporary measure" the Ministries of Commerce and Education. His action in gradually bringing the various Cabinet posts under his personal control resembled the action of Mussolini in the last months of his dictatorship. The importance of the new Ministry of Munitions was indicated by the various bureaus included—mobilization, aerial ordnance, machinery, iron and steel, light metals, nonferrous metals, military science, fuel and electric power. Other changes included the creation of general headquarters for air defense in the Home Ministry and of a Bureau of Economic Warfare in the Foreign Office. The Cabinet Information Board was also expanded to include a new Office of Facts and Figures.

The new arrangement was approved by the "rubber stamp" Diet on October 25. The Tokyo radio, in referring to the foregoing, stated that no interpellations or questions were permitted and the Government's proposals "were adopted as already drawn up."

The powerful totalitarian party known as the Imperial Rule Assistance Association or, to use its other title, "League for the Support of the Throne," was also reorganized "leading toward the perfection of a rigorous imperialism of the people." The Government announced on August 12 a drastic regulation banning public gatherings such as lectures, social functions, sports contests, or any meetings not authorized or arranged through the official propaganda agency. The Cabinet on October 12 approved a measure reducing government administrative personnel by 25 per cent, which meant the "dropping of 15,000 persons," according to the report.

Tojo's Ten-Points. Premier Tojo on November 29 announced a 10-point program embracing "absolutely indispensable" steps, which he said must be adopted to meet the exigencies of the war situation. At the top of the list cited by the Premier and Commander in Chief was a "substantial" increase in airplane production, a subject which was stressed repeatedly in the last months of 1943. The next three points referred to the necessity of stepping up production in war, industrial, and food fields. Further points were concerned with the necessity of strengthening defense against air-raids and the utilization of the population and resources of puppet and conquered territories.

Premier Tojo announced at the same time the appointment of a new Cabinet adviser, Ginjiro Fujiwara, with the rank of Cabinet Minister without portfolio. Fujiwara was to devote his efforts to increasing plane production. He delivered an address, broadcast simultaneously with the address of Premier Tojo, in which he declared in flamboyant manner his determination "to overthrow the enemy who boasts of his numerical superiority in planes in the shortest time possible." Kazuo Aoki, Minister of Asiatic Affairs and Chief Control Officer over puppet areas, also appealed to workers in the Mitsubishi Aircraft Company's plants to "accelerate their efforts."

Efforts to stimulate production of war materials, particularly airplanes, followed moves earlier in the year to step up production and reduce consumption of consumer goods. At that time the Premier, addressing a meeting of prefectural and municipal officials at the capital, declared that although the Government was planning new meas-

ures to stimulate war production it was, nevertheless, vital that the people who were already facing "painful hardships" be made to understand Japan's war aims and remain in unity with the Government. He urged the 100,000,000 people of Japan "to hold their firm confidence in absolute victory and participate in the battle with their noble and tenacious fighting spirit." The Premier instructed prefectural officials to take "immediate and concrete steps" in the event they detected any dissatisfaction or unsettled feeling among the people within their jurisdictions. It was announced that henceforth all workers in Japan would be subject to compulsory labor laws under the Government's national mobilization plan.

Control of Business. Governmental measures designed to stimulate production included the appointment early in March of a Wartime Economic Council and an Administrative Supervisory Council. The Cabinet Advisory Council included the following: Admiral Teijiro Toyoda, Minister of Commerce and Industry in the second Konoye Cabinet and Foreign Minister in the Third Konoye Cabinet; Viscount Masatoshi Okochi, member of the House of Peers; Ginjiro Fujiwara, a member of the Yonai Cabinet and a member of the House of Peers; Toyotaro Yuki, an executive of the Bank of Japan; Kamesaburo Yamashita, president of the Yamashita Steamship Company; Kiyoshi Goki, managing director of the Mitsubishi heavy industries; Chuji Susuki, president of the Showa Electric Industry Company.

The Wartime Economic Council which is headed personally by the Premier, includes the above Cabinet advisers and the Army and Navy Ministers. The Cabinet conferred extraordinary wartime administrative powers on Premier Tojo by promulgating an act giving him undisputed authority to issue orders "in the event of special necessity arising in connection with the expansion of key war materials such as iron, steel, coal, light metals, shipping, and airplanes." On August 26 Emperor Hirohito summoned leaders of various industries to the Palace to discuss increased production. The Emperor expressed deep concern over war production and urged new efforts.

Specific measures adopted between June and December included an agreement whereby the Government on October 16 became half owner of most of the enterprises of the two great family groups in Japan, the Mitsubishi and Sumitomo concerns. Under the terms of the agreement the directors of the two concerns were to double the capital of the various companies engaged in aircraft production, naval construction, steel, and chemicals. The Mitsubishi concern also was to increase the output of its machine tool plants and take over direction of the Japanese Aluminum Company. Mitsubishi, in addition, agreed to erect a number of magnesium plants and begin manufacture of duraluminum.

In order to allay uneasiness in industrial circles caused by these moves, the Government announced it had no intention of taking over the big industrial plants. The Mitsubishi and Sumitomo family concerns were among the largest industrial and financial organizations in Japan and ranked with the Mitsui and Yasuda families as leaders in the financial life of the country. Their enterprises included mining, shipping, agriculture, and other activities as well as manufacturing and finance.

On November 10 the Government decreed a fundamental reorganization of Japanese commerce, especially foreign trade, in furtherance of the

program for "consolidation of the entire economic life of the country." The outstanding feature of the decree was a drastic reduction in the number of firms permitted to engage in foreign trade—from 6,000 to 600. Only those firms which had an average turnover of 5,000,000 yen in 1941 and 1942 were permitted to continue in business.

The reorganization of the Empire's foreign trade set-up was part of Premier Tojo's announced program of completely overhauling the entire industrial and commercial structure. The plan encompassed consolidation of all productive elements in all fields of industry, the expansion of undeveloped industries vital to the prosecution of the war, the improvement and renovation of productive technique, the readjustment of labor, rationalization of the transportation industry, and reorganization of finance and banking in order to provide necessary funds "expediently and harmoniously." The program was drawn up by Lieut. Gen. Teichi Suzuki, chairman of the Cabinet Planning Board, and was approved by Premier Tojo and the Cabinet.

Prices and Morale. Japanese civilians continued to take in their belts with customary docility and there was no indication of a crack in morale despite mounting prices and growing shortages in food in Japan. This was the consensus among American refugees who returned to the United States in early December on the second trip of the neutral Swedish exchange ship *Gripsholm*. The repatriates were guarded in their statements and admitted that they had been warned that reports of "sensationalized" incidents might result in retaliation against other internees.

Living costs for the common people in Japan had doubled by the end of 1943 despite government-pegged prices. Supplies of coal, rice, fish, meat, clothing, and other necessities were limited and strictly rationed, but despite strict regulations and heavy penalties, the black market was rampant and wartime profiteering was extensive. Food shortages were partly due to transportation congestion caused by military demands. Civilians had to get a Government permit in order to take a trip on a train. Wartime necessity absorbed all newly acquired raw materials including cotton fiber. Clothing, heavily loaded with "staple" made from wood pulp, deteriorated after two or three washings or trips to the cleaner. Shoes cost 150 yen a pair, were made of composition material, and fell apart in the first rain.

According to a report by one correspondent, the Japanese yen, once worth 50 cents in U.S. currency, but reduced to 23 cents before Pearl Harbor, was now an uncertain unit. From the standpoint of international exchange, it was rated by speculators as worth anywhere up to 450 for one American dollar. However, it was still a yen to the man in the street who had no interest in foreign exchange and was only concerned with the wherewithal to purchase the next meal.

Rice, staple food of the people, soared from 17 yen per hundredweight in December, 1941, to 80 yen two years later. Meat cost two and a half times as much as it did in 1941.

The food situation in Japanese-occupied territories, particularly in China, was even more serious than in Japan. The cost of living in the Yangtze Valley, which is China's "rice bowl," had increased from 300 to 3,000 per cent since the Japanese occupation. Eggs, which once could be purchased in the Shanghai market for 1 cent each, cost \$2.40 each. Even the upper class Chinese were in tatters. Prevailing prices in Shanghai in

August, 1943, indicated the desperate situation: Meals at the leading Cathay Hotel, minimum, \$50; room and meals at the same hotel, one month, \$10,000; meals at a low-cost Russian restaurant consisting of soup, black bread, and spaghetti, \$20; loaf bread, \$9.90; coffee (Maxwell House), \$800; three fresh Chinese pears, \$100; pomelo (similar to grapefruit), \$25; bananas, none available; sugar, unobtainable; gasoline, \$300; whiskey, from \$500 to \$1,800 a quart for genuine Scotch; butter, \$400 for 12-oz. tin, Australian brand. An American \$100 banknote smuggled in from Chungking was exchanged in the Shanghai black market for \$15,000 in currency of the puppet Central Bank.

General opinion regarding the attitude of the Japanese masses in 1943 may be summarized as follows:

1. The Japanese people were prepared to accept with patriotic obedience any further privations the war might bring.

2. Japanese governmental attempts to camouflage their dwindling war advantages, had defeated themselves and to some extent aroused disbelief among the people.

3. The Japanese were prepared for a long, hard war and no internal explosion was likely to overthrow the military dictatorship which ruled in the name of Emperor Hirohito.

Health conditions among the Japanese had deteriorated and there had been a great increase in the national scourge, tuberculosis. Kingoro Hashimoto, an official of the Imperial Rule Assistance Association, declared in a broadcast that miners afflicted with tuberculosis "continue to work patriotically without treatment until the advanced stage of the disease causes their deaths."

Status of Japan's Allies. According to a correspondent from Shanghai, the position of Europeans, including Germans, Italians, and Russians everywhere in Japanese-occupied territory, was growing extremely precarious. Even the Germans were having a difficult time, as their situation became worse every time German armies suffered a reverse on the Russian front. Italians scattered through Jap-occupied areas in China also faced growing danger after the fall of Mussolini and the entrance of United Nations forces into Italy. Italian marines stationed at Tientsin under the old Boxer protocol were disarmed and interned and all Italian civilians in Shanghai and other coast port cities were placed under house-arrest. The large Italian liner, *Conte Verde*, was scuttled by its crew at Shanghai when they received word of the Italian collapse.

German Jewish refugees, some 25,000 of whom went to Shanghai following the advent of Hitler, were in a desperate situation. Aside from a few professional men employed by the Japanese in various necessary services, they were concentrated in a camp or "ghetto" which was worse than any Nazi ghetto in Europe due to lower Japanese standards of living. Russian and German Jews who had established small businesses in the foreign settlements had their properties confiscated and turned over to Japanese merchants.

Cairo Declaration. The most important political development on the Pacific front in 1943 was the Cairo Declaration on December 1 (see UNITED NATIONS for text).

Although Premier Joseph Stalin was not present at the Cairo Conference, the issuance of the Declaration immediately preceding the Roosevelt-Churchill meeting with Stalin at Tehran, made it practically certain that Russia would, sooner or

later, become an active participant in the war against Japan. While Russia had strictly observed in letter and spirit her neutrality pact with Japan, it was obvious that Russia would wish to participate with the United States, Great Britain, and China, following the defeat of Japan, in disposing of the important Japanese-controlled territories bordering on the Soviet Union.

Japanese spokesmen attempted to minimize the importance of the Cairo Declaration, but Tokyo's serious concern was indicated by a hurried conference which the Japanese Foreign Minister, Mamoru Shigemitsu, held with Yakov Malek, Soviet Ambassador, and Heinrich Stahmer, German Ambassador.

A significant element not mentioned in the Cairo Declaration, but nevertheless of vital interest to Russia, concerned the future of the strategically and economically important southern half of Sakhalin Island. If Japan was to be stripped of territories illegally acquired since 1895, this would obviously include the restoration to Russia of the southern half of Sakhalin which Japan acquired from Russia at the Portsmouth Peace Conference, following Russia's defeat by Japan in 1904-05. Sakhalin is rich in oil, coal, and other minerals.

Russo-Japanese Relations. Russian interest in a change in sovereignty over Korea and Manchuria might be likened to the interest of the United States in a possible change in the national status of Canada, Mexico, or Cuba, due to their proximity to our borders.

Since Japan long had designs on Siberia and had occupied much of the territory following the Soviet Revolution in 1917, it was expected that Japan would invade Russia's Far Eastern territories following Japan's occupation of Manchuria in 1931 and parts of Mongolia in 1937-38. The anti-Comintern Pact which Japan signed with Germany in 1936 was directed at the Soviet Union and it was believed that the military alliance which Japan signed with Germany and Italy on Sept. 27, 1940, contained a clause providing for a Japanese attack on Siberia as soon as Nazi troops had invaded the Soviet Union.

The months following Japan's occupation of Manchuria in September, 1931, were occupied by strenuous Japanese activities in obvious preparation for an invasion of Siberia. New ports were opened on the upper eastern coast of Korea, opposite Vladivostok and new railways were built to the Siberian border with the obvious purpose of facilitating Japanese military transport to the Siberian border. Pressure was brought to bear on the Russians to force them to sell the Chinese Eastern Railway to Japan at a fraction of its original outlay. This action cost the Russians heavily in prestige with the Chinese who owned a half interest in the railway. In 1929 the Russians used force to prevent the Chinese from taking over the railway, despite the fact the Soviet leaders had offered to restore the 200-mile line to China immediately following the Revolution in 1917.

Soviet citizens and Russians, particularly Jews, holding certificates of Soviet citizenship, who resided in Manchuria were subjected to persecution and extortion by the Japanese or White Russian gangsters in Japanese employ, following the Japanese occupation.

In 1938-39 there were clashes between Japanese and Soviet troops stationed along the Manchurian-Siberian border which, under ordinary circumstances, would have provided sufficient provocation for war. These clashes, particularly along the

Amur River for the possession of islands lying in the stream often resulted in casualties on both sides. The first serious clash on the land frontier resembling actual war occurred in 1938 when the Japanese without prior notice occupied a strategic hill in the vicinity of Lake Khassan, a short distance from Vladivostok. Possession of the hill gave the Japanese Army a strategic advantage in the event of a move to encircle or cut off Vladivostok. But the Soviet forces did not hesitate. They launched a combined land and air attack on the Japanese forces and compelled them to withdraw from the occupied area.

Another and more serious clash occurred in May, 1939, on the western border of Manchuria which involved Soviet-controlled Outer Mongolia. In this instance the Japanese also moved across the border and occupied Russian (Mongolian) territory. The area seized was in the vicinity of Lake Buir Nor, an important source of water supply for the semi-arid grazing district. The Japanese claimed the Buir Nor lake area belonged to Manchukuo and without warning moved in and occupied it with their troops. Mongolian guards with Soviet officers on the border put up strong resistance but were compelled to withdraw. Fighting continued for ten days with each side bringing up reinforcements. By May 22 the Japanese had a sufficient force, consisting of tanks, armored cars, artillery, and aircraft which was transported across the prairie from their big military base at Hailar, to launch a major attack. But the Russian-Mongol forces were ready and threw the Japanese back with serious losses. Fighting continued intermittently until July 2 when the Japanese launched a more determined attack with two divisions of infantry, a half dozen cavalry regiments, and large numbers of both planes and tanks. In the fighting which developed on a major scale the Russians brought up several of their large "land-battleships" or heavy tanks, the like of which the Japanese never before had seen. Japanese losses were heavy, variously estimated up to 18,000, while both sides lost heavily in planes. By September the tide had turned completely against the Japanese so they asked for an armistice and peace was restored with the Russian-Mongol forces in complete control of the original border and the water supply.

While the Japanese made their usual exaggerated claims regarding losses inflicted on the enemy, neutral newspaper correspondents attested to the superiority of both Soviet planes and tanks. Marshal Voroshilov, War Commissar, declared that Russia was prepared "at any moment to repeat the fighting on a larger and more convincing scale." But the Japanese had enough and their attitude toward the Soviets changed from open hostility to conciliation.

Early in 1941 Foreign Minister Matsuoka succeeded in renewing the Russo-Japanese fisheries agreement, concerning Japanese fishing rights in Siberian waters. The Russians exacted a 20 per cent increase in price through a currency exchange readjustment and also refused to extend the agreement for more than one year (previously the agreement had been issued for three-year periods).

In March and April, 1941, Matsuoka went to Berlin and Rome to negotiate the anti-Comintern Military Pact and returned home by way of Moscow where he stopped over for a conference with Soviet officialdom. On April 13 the world was startled by the announcement that Japan and Russia had signed a Neutrality Pact. Reports in the Japanese papers stated that the signing of the pact had taken place in an atmosphere of "utmost friendliness" and that both Stalin and Molotov had accompanied Matsuoka and his party to the railway station and

that Premier Stalin had thrown his arms around the neck of Japan's diminutive Foreign Minister and in a burst of affection had kissed him good-bye.

The terms of the Neutrality Pact as published simultaneously in Tokyo and Moscow contained the following clauses:

Article I. Both contracting parties undertake to maintain peaceful and friendly relations between themselves and mutually to respect the territorial integrity and inviolability of the other contracting party.

Article II. Should one of the contracting parties become the object of hostilities on the part of one or several third parties, the other contracting party will observe neutrality throughout the duration of conflict.

Article III. The Governments of the U.S.S.R. and Japan solemnly declare that the U.S.S.R. pledges itself to respect the territorial integrity and inviolability of Manchukuo and Japan pledges herself to respect the territorial integrity and inviolability of the Mongolian People's Republic.

Of the three points, the most important were the "neutrality" provision and what amounted to a mutual recognition on the part of Japan and Russia of each other's seizure of Chinese territory, Russia in Mongolia and Japan in Manchuria.

That there were further unpublished clauses in the agreement was indicated in several important developments in the relations of the two countries. First and most important was the immediate cessation of Russian support, in the form of arms shipments to the Government of Generalissimo Chiang Kai-shek. The Japanese also discontinued their "anti-Comintern" propaganda. Next in importance was Russia's action in suppressing an active Korean independence movement in the regions of Vladivostok and eastern Manchuria where thousands of Koreans had migrated from their homeland. The large Korea University at Vladivostok where Korean revolutionaries received instruction was closed and the Koreans deported to the interior of Siberia.

Two months after the signing of the Soviet-Japanese Neutrality Pact Germany attacked Russia without warning and almost exactly eight months after the signing of the Pact the Japanese made their sneak attack on Pearl Harbor.

Both Japan and the Soviet Union have found their new situation satisfactory although it had created an incongruous situation, with Russia fighting Japan's Axis partner, Germany in Europe and Russia's partner, America, fighting Japan in the Pacific.

See AERONAUTICS; BIRTH CONTROL; NAVAL PROGRESS; AUSTRALIA, BURMA, CHILE, COSTA RICA, INDIA, IRAQ, NETHERLANDS EAST INDIES, PERU, PORTUGAL, and THAILAND under *History*; UNITED NATIONS.

JOHN B. POWELL.

JAPANESE IN THE UNITED STATES. See ALIENS.

JAPANESE PACIFIC ISLANDS (Nanyo). The former German possessions in the Pacific, north of the Equator (130° to 175° E. and 0° to 22° N.), over which Japan was appointed mandatory in accordance with the terms of the Treaty of Versailles, 1919. The mandate comprises some 1,458 islands, islets and reefs, extending over an area of 1,200 miles north to south and 2,500 miles west to east. There are three main groups: (1) MARIANA or LADRONE (14 islands), including Saipan, Tinian, Rota; (2) CAROLINE (577 islands), including Yap, Palau (Babeldoab), Koror, Truk, Ponape, Kusaie; (3) MARSHALL (60 islands), including Jaluit. Total area, 830 square miles. Population (1940 census), 131,157 (72,540 males and 58,617 females).

Production and Trade. The main products were sugar, maize, coffee, phosphates, tapioca, bananas, breadfruits, copra, alcohol, vegetables, fish, forest products, and bauxite. Trade (1938): imports were

valued at U.S.\$8,723,000 (rice, machinery, cloth, oil, wax, wood and wood manufactures, cigarettes, and alcohol were the chief items); exports were valued at U.S.\$13,350,000.

Government. Budget (1940): revenue U.S.\$2,564,182; expenditure U.S.\$2,540,228. The administrative affairs of the mandate were managed by a governor who was subject to the direction of the Japanese Minister of Overseas Affairs, except that he was under the minister in charge, respectively, in matters relating to communications, finance, and commerce and industry. Headquarters of the Governor were in Koror, one of the Palau islands in the western Carolines. (See JALUIT, KUSAIE, PONAPE, TRUK, and YAP.)

JARVIS ISLAND. A mid-Pacific island (0° 23' S. and 159° 54' W.), south of Hawaii; owned by the United States. The island lies in the path of the main steamship lanes and airways from Honolulu to New Zealand and Australia. In former years guano was produced from the island but it remained uninhabited for a number of years until 1936 when the U.S. Department of the Interior set up an aerological station.

JAVA. See NETHERLANDS EAST INDIES.

JEBEL DRUZE. Same as *Djebel Druze* (q.v.) under SYRIA AND LEBANON.

JEFFERSON MEMORIAL. See ART under *Sculpture*.

JEHOVAH'S WITNESSES. See AUSTRALIA under *History*; LAW under *Decisions Concerning Personal Liberties*.

JET-PROPELLED AIRCRAFT. See AERONAUTICS.

JEWEL PRODUCTION, JEWELRY. See FASHION EVENTS; NATIONAL BUREAU OF STANDARDS; PLATINUM.

JEWISH CONGREGATIONS. For the latest information available, see RELIGIOUS ORGANIZATIONS and the article on JEWISH CONGREGATIONS in the 1942 YEAR BOOK.

JEWISH WELFARE BOARD. Organized Apr. 9, 1917, the Board has a two-fold purpose. It is the parent body for Y.M.H.A.'s, Y.W.H.A.'s and Jewish Community Centers in the United States and Canada. It also provides for the religious and welfare needs of men and women in the armed forces of the United States. The Board is composed of 315 constituent societies in the United States and Canada, which have 410,000 members. Seven regional organizations are affiliated in its work.

The Board serves the Jewish Center field and deals with problems relating to programs of activities and administration, vocational guidance, educational, cultural, and recreational activities, special Jewish cultural programs, community surveys and institutional studies, club leadership training, summer and day camps, health and physical education, forums and lectures, personnel service, and maintains a field service in contact with its affiliated organizations. The Jewish Center Division cooperates closely with government and private agencies regarding war activities and brings material and plans to the attention of the constituent societies.

The Jewish Welfare Board is one of six organizations of the United Service Organizations (q.v.). In this connection, its activities are conducted on a nonsectarian basis.

The Army and Navy Committee of the Board, Walter Rothschild, chairman, serves men and women of Jewish faith in the Army and the Navy. This Committee is composed largely of representatives of the 37 national Jewish organizations which

are affiliated with it. There are almost 500 local Army and Navy Committees in the United States as well as overseas, through which communities co-operate in providing welfare activities for men and women in the armed forces. The Committee on Religious Activities (Rev. Dr. David de Sola Pool chairman) recruits and endorses rabbis to serve as chaplains in the Army and Navy, and prepares the devotional literature distributed to Jewish personnel in the forces. Other committees in the Army and Navy Division include Personal Service, Veterans Service, and Bureau of War Records.

The Women's Division (Mrs. Alfred R. Bachrach, chairman) coordinates the efforts of national and local women's groups in behalf of the program of service to men and women in uniform and civilian war efforts.

The officers of the Board are: Irving Lehman, Honorary President; Frank L. Weil, President; Lloyd W. Dinkelspiel, Mrs. Walter E. Heller, Mr. Carl M. Loeb, Jr., Mr. Walter Rothschild and Mrs. Felix M. Warburg, Vice-Presidents; Max Wilner, Treasurer; Joseph Rosenzweig, Secretary; and Louis Kraft, Executive Director. The headquarters are at 220 Fifth Avenue, New York City.

JEWS. See REFUGEES; also ALGERIA, ARGENTINA, BELGIUM, BULGARIA, DENMARK, GERMANY, HUNGARY, ITALY, JAPAN, MOROCCO, NETHERLANDS, POLAND, RUMANIA, and TUNISIA. For activities in the United States see JEWISH WELFARE BOARD; groups listed under SOCIETIES, as *Jewish Women, Inc.*; *ORT*; *Zionist Organization*; *Zonta International*.

JOHNSTON ISLAND. An atoll in the central Pacific, 809 air miles southwest of Honolulu, belonging to the United States. Useful as an advance observation post in the Hawaiian defense system, it is under the jurisdiction of the Navy Department. With funds appropriated by Congress in 1939 and 1941, the atoll was converted into a naval air base and submarine base. A channel was cut through the barrier reef; coral heads were removed from the lagoon to permit its use by seaplane tenders, seaplanes, and submarines; and landplane runways and other aviation facilities were installed. On May 15, 1941, the island was designated a "naval defensive sea area" and on Aug. 15, 1941, the naval air station was commissioned. In December, 1941, the installations were attacked by Japanese ships and planes. A United States garrison remained in control throughout 1943.

JOINT BRAZIL-UNITED STATES DEFENSE COMMISSION. A Commission composed of military delegates (Army, Navy, and Air Forces) of the two countries, established in August, 1942. Meetings are held in Washington for the purpose of making staff plans for the mutual defense of the Western Hemisphere. U.S. Chairman: Maj. Gen. J. G. Ord.

JOINT CHIEFS OF STAFF, U.S. Under the direction of the President, the Joint Chiefs of Staff are responsible for coordination between the Army and the Navy, representing the United States in the Combined Chiefs of Staff. In operations for which the United States has sole or primary responsibility, they are charged with the strategic conduct of the war. They are further responsible for the broad program of war requirements based on approved strategic policy; for the allocation of munition resources based on strategic needs and the availability of means of transportation; and for the requirements for overseas transportation based on ap-

proved strategic priority. For membership, see COMBINED CHIEFS OF STAFF.

Office of Strategic Services. On June 13, 1942, the Office of Strategic Services, formerly the office of Coordinator of Information, was placed under the jurisdiction of the Joint United States Chiefs of Staff. Its functions, as modified by Executive order on Mar. 9, 1943, are (a) to collect and analyze such strategic information as may be required by the Joint Chiefs of Staff, and (b) to plan and operate such special services as may be directed by the Joint Chiefs of Staff. The director is Brig. Gen. W. J. Donovan.

JOINT ECONOMIC COMMITTEES (Canada and the United States). The Joint Economic Committees were established by the United States and Canada on June 17, 1941, to study and report to their respective governments on the possibilities of (1) effecting a more economic, more efficient, and more coordinated utilization of the combined resources of the two countries in the production of defense requirements and (2) reducing the probable postwar economic dislocation consequent upon the changes which the economy in each country is presently undergoing. The United States Committee is interdepartmental representing the Federal Reserve Board, War Production Board, Tariff Commission, Department of Agriculture, National Resources Planning Board, and State Department. The chairman is Alvin H. Hansen.

JOINT ECONOMY COMMITTEE (Byrd). See UNITED STATES under *Investigations*.

JOINT MEXICAN-UNITED STATES DEFENSE COMMISSION. A Commission organized Jan. 12, 1942, to study problems relating to the common defense of the United States and Mexico, to consider broad plans for the defense of Mexico and adjacent areas of the United States, and to propose to the respective governments cooperative measures.

U.S. Chairman, Vice Adm. A. W. Johnson.

JOINT PRICE ADJUSTMENT BOARD. A Joint Board created Oct. 20, 1943, to exercise certain authority formerly exercised by the individual agencies renegotiating war contracts; i.e. the War, Navy and Treasury Departments, the Maritime Commission, the War Shipping Administration, and the Reconstruction Finance Corporation for its subsidiaries subject to the Renegotiation Statute.

The personnel of the Joint Board is as follows: Mr. Joseph M. Dodge, Chairman of the War Department Price Adjustment Board, Chairman; Mr. Kenneth H. Rockey, Chairman of the Navy Price Adjustment Board, vice chairman; Mr. Thomas M. Woodward, Chairman of the Maritime Commission Price Adjustment Board, who is also representing the War Shipping Administration Price Adjustment Board; Capt. Harry C. Maull, Jr., Chairman of the Treasury Department Price Adjustment Board; Mr. Charles T. Fisher, Jr., Chairman of the Reconstruction Finance Corporation Price Adjustment Board, and Mr. Carman G. Blough, War Production Board representative.

The establishment of the Joint Board provides a formal procedure in place of the informal procedure which has been followed by the individual price adjustment boards since their establishment and the relationship which has been maintained between them in such matters as the adoption and publication of joint statements of purposes, principles, policies, and interpretations.

The Secretary or head of each of the departments

or agencies engaged in renegotiating war contracts under the Renegotiation Statute has delegated authority and discretion to the joint board as follows:

(a) To formulate and adopt statements of purposes, principles, policies, and interpretations under the statute which shall be binding on the Departments.

(b) To define, interpret and apply by joint regulation the exemption specified by the statute relating to the product of a mine, oil or gas well or other mineral or natural deposit or timber.

(c) To exempt from some or all of the provisions of the statute general classes or types of contracts, and to formulate standards for the exemption of such contracts.

(d) To determine whether any contractor shall be required to renegotiate for any fiscal period the contract price under some or all of his contracts subject to renegotiation under the statute.

(e) To assign any contractor to any Department for determination whether excessive profits have been or are likely to be realized from some or all of its contracts subject to renegotiation under the statute.

(f) To prescribe by joint regulation the form and details of the financial statements contractors may file, and the form, time and manner of giving the notice to which they are entitled, in order to commence the running of the period of limitation after which its contracts cannot be renegotiated.

Proposed amendments to the Renegotiation Statute were contained in the Revenue Act of 1943, which was pending before Congress at the end of 1943. For details, see *TAXATION*.

JOINT WAR PRODUCTION COMMITTEE (Canada and the United States). The Joint War Production Committee of Canada and the United States was established on Nov. 5, 1941, by the President of the United States and the Prime Minister of Canada, to coordinate the capacities of the two countries for the production of war materiel. For details, see 1943 *YEAR BOOK*, p. 351.

JOURNALISM, JOURNALISTS. See *MAGAZINES*; *NEWSPAPERS*; *PULITZER PRIZES*; *RADIO PROGRAMS*.

JUDGES, Election of. See *LAW* under *Reform of Legal Procedure*; *NEGROES*.

JUGOSLAVIA. See *YUGOSLAVIA*.

JUILLIARD MUSICAL FOUNDATION. See *PHILANTHROPY* under *Foundation Activities*.

JUKE BOXES. See *STATE LEGISLATION* under *Taxation and Finance*.

JUNIOR CITIZENS SERVICE CORPS. See *CIVILIAN DEFENSE*, *OFFICE OF*.

JUNKERS. See *AERONAUTICS* under *Axis Types*.

JUSTICE, U.S. Department of. A Department of the U.S. Government which in 1943 had the following divisions and offices.

- Office of the Attorney General
- Office of the Solicitor General
- Office of the Pardon Attorney
- Antitrust Division
- Tax Division
- Claims Division
- Lands Division
- Criminal Division
- Customs Division
- War Division (see 1943 *YEAR BOOK*, p. 352)
- Administrative Division
- Federal Bureau of Investigation (q.v.)
- Bureau of Prisons (see *PRISONS*)
- Immigration and Naturalization Service (see *IMMIGRATION*)
- Board of Parole
- Board of Immigration Appeals

Attorney General in 1943: Francis Biddle. Solicitor General: Charles Fahy.

JUVENILE DELINQUENCY. In wartime, as in peacetime, delinquent behavior of children and young people is a sign of unsatisfied needs. In addition to their physical requirements for nourishment, clothing, shelter, protection, and medical care, children need the knowledge that they are loved, an

assured place in family and community life, and a chance to develop and use in suitable ways their intelligence, judgment, and initiative. During 1943 the great majority of young people in the United States met successfully the upsets and stresses of wartime, but even some of these may show a delayed reaction to emotional strains and deprivations resulting from the war and many who were not involved in overt acts of delinquency probably suffered to some extent from the factors that promote delinquency.

That juvenile delinquency—in the legal sense of an act or conduct that brings a child within the jurisdiction of the juvenile court—has increased in the United States under wartime conditions is clearly indicated by available information. Statistics reported to the Children's Bureau by nearly 500 juvenile courts furnish the most comprehensive body of information in this field. For 83 of these courts, all of which serve areas of 100,000 or more population, statistics are available for a series of years. The total number of delinquency cases disposed of by the 83 courts increased from 65,000 in 1940 to about 75,500 in 1942, an increase of 16 per cent. A recent study made by the National Probation Association that covered courts in 153 areas gave a similar percentage increase.

Statistics on juvenile-delinquency cases disposed of by juvenile courts, although representing the most reliable index available as to the extent of the delinquency problem, are affected by many variable factors. The jurisdiction of juvenile courts ceases at 16 years in some States, in others at 17 or 18 years or later. The reasons for which children are referred to juvenile court are varied, yet all, trivial and serious alike, are included in the total—the case of the child who hitched a ride on the streetcar or rode his bicycle on the sidewalk, as well as the case of one who robbed a store or committed assault. In places where social services are available for dealing with problems of behavior, the cases of many children whose conduct is contrary to law may be handled effectively without court action. On the other hand, an increase in delinquency cases may represent increased community concern with certain types of offense. Thus, the emphasis placed on the control of venereal diseases has resulted in bringing the problems of young girls increasingly to the attention of the courts.

For the 83 courts in the Children's Bureau series the percentage increase in girls' cases from 1940 to 1942 was strikingly greater than the increase in boys' cases (38 per cent compared with 11 per cent, respectively). Of the approximately 75,500 cases disposed of in 1942, however, about 60,500 involved boys and 15,000 involved girls, so that boys' cases outnumbered girls' cases by four to one.

Increases in juvenile-delinquency cases were associated, apparently, with conditions prevalent in rapidly growing war production areas. Of the 83 courts, 41 were situated in areas of increasing population, and for this group the increase in juvenile delinquency from 1940 to 1942 was 18 per cent. For the 42 courts in areas of declining population, the increase for this period was 9 per cent. Comparable reports for 1940 and 1942 for 130 courts in the Children's Bureau series, which serve small towns or rural areas in Massachusetts, New York, Ohio, and Rhode Island, show that in 49 of these courts the number of juvenile-delinquency cases decreased; in 8 there was no change; and in 73 the number increased.

The roots of delinquent behavior may go back to unsatisfied hunger for mothering and fathering

in infancy or early childhood; to loss of security through family migration or the breaking up of family routines; to a child's bewilderment at the fact that he is expected to check his own destructive impulses while the vastly greater destructiveness of war is accepted by adults. They may be found in the experiences of school children who lack security and guidance, or the sense of personal achievement, who find the curriculum unsuited to their needs, or who suffer from wartime restrictions on educational opportunity. Adolescents react even more sensitively to war and to wartime demands that result in frustration, renunciation of personal plans, and restriction of freedom of action. The normal adolescent conflict between dependence on the family and the drive to become independent is sharpened by war conditions. Both boys and girls become resentful of authority, impatient to prove their personal worth, eager to live fully and dangerously. Thus, children of all ages are subjected during the war to more of the psychological conflicts that make for delinquency than ever before.

Other situations prevalent in wartime undoubtedly foster delinquency. One of these is lack of parental supervision because of the absence of fathers in the armed forces and the widespread employment of mothers in war industries. The importance of supervision and care for school-age children whose mothers are employed cannot be ignored as a factor in delinquency control. Another condition conducive to delinquency is the employment of teen-age boys and girls, either part-time or full-time, late at night or under conditions that curtail their schooling, impede their growth, or expose them to unwholesome influences. Other wartime conditions that make for increased delinquency are the extensive migration of families to crowded war centers where community resources, including schools, playgrounds, and health facilities, are overtaxed; the accessibility of "attractions" such as cheap dance halls or beer parlors in the vicinity of military establishments or industrial centers; and the general spirit of excitement and unrest generated by war.

As communities became increasingly conscious of their responsibility to assist parents in meeting the wartime needs of children and youth and of their further responsibility to provide services outside the home that are necessary for the rounded development and protection of children and youth, they turned to Federal agencies and national youth-serving organizations for guidance. In February, 1943, a special meeting of the Children's Bureau Commission on Children in Wartime was held at the White House, at which attention was focused on problems of juvenile delinquency. As one result of this meeting the Children's Bureau, in consultation with other Federal agencies, prepared a bulletin, "Controlling Juvenile Delinquency—A Community Program," which was published in November. The goals for community action suggested in it are: Strengthening of resources needed by all children; protection of groups of children especially vulnerable to delinquency; control of harmful influences in the community; and provision of services for the delinquent child and the child with behavior problems. Among the community resources described as important in preventing delinquency are the home, the school, the church, and recreational and group activities. Groups of children considered especially vulnerable to delinquency include children of employed mothers, boys and girls in employment, children living in crowded

quarters or congested areas, mentally and physically handicapped children, and children in families with economic need. Control of harmful influences in the community depends on well-drawn laws and ordinances, effective enforcement of them, the protection of youth in public places, and the voluntary cooperation of commercial establishments in safeguarding children. Services considered essential for the delinquent child and the child with behavior problems include social services and child guidance, the police and the juvenile court, adequate detention care, and provision for adequate institutional and foster-family care.

In connection with the enforcement of the May Act prohibiting prostitution near military or naval establishments and the venereal-disease-control act, the cases of young girls engaged in prostitution, many of them already infected with venereal disease, attracted public attention. During the year the Children's Bureau of the U.S. Department of Labor and the Division of Social Protection of the Office of Community War Services (see *FEDERAL SECURITY AGENCY*) began the development of a program for strengthening the juvenile services of police departments. In November, 1943, a conference was held at the Children's Bureau, which was attended by members of the International Association of Chiefs of Police, the National Sheriffs' Association, the Division of Social Protection of the Office of Community War Services, the Federal Bureau of Investigation and the Bureau of Prisons of the Department of Justice, the Office of Education of the Federal Security Agency, and the American Public Welfare Association, as well as by child-welfare workers and educators in the social-service field. Emphasis was placed on the need for closer working relationships in local communities between social-welfare and law-enforcement agencies and the further coordination of social services for juveniles who come to police attention. The Bureau was requested to appoint a committee to explore the possibilities and to develop emergency and continuing programs for training policemen and policewomen dealing with juveniles.

Many of the children who require attention because of delinquent or unacceptable behavior can be dealt with in their own homes, without action by the police or the juvenile court, if social services are available to help them and their families with their problems. Through the program of child-welfare services established under title V, part 3 of the Social Security Act, the Children's Bureau continued to make grants to State welfare agencies for services to homeless, dependent, and neglected children, and children in danger of becoming delinquent. During the year these services were adapted to the fullest extent possible to meet wartime needs. Twelve States (Alabama, Arizona, Indiana, Michigan, Minnesota, Mississippi, New York, North Carolina, South Dakota, Texas, Utah, and Virginia) devoted a part of their funds to special projects for the study and prevention of delinquency. Five States (Indiana, Michigan, Minnesota, Texas, and Utah) provided for a special consultant in delinquency problems on the staff of the State welfare agency. Six States (Alabama, Arizona, Mississippi, New York, North Carolina, and Virginia) provided for special workers in connection with the State industrial schools for delinquent children. Two States (Indiana and South Dakota) assigned local child-welfare workers to areas faced with special wartime delinquency problems.

Widespread detention of children in jails continued to be reported. According to a recent Children's Bureau study made in representative com-

munities of three States, hundreds of children under 16 years of age were found to have been detained in county jails in the course of a year, some of them for many nights. Yet food, sanitary conditions, medical care, and staff in local jails are generally so unsatisfactory that a very small proportion of them in the States where the study was carried on had been approved by the Federal Bureau of Prisons for the detention of Federal prisoners, either adult or juvenile. Moreover, many of the jails lacked provision for keeping children in separate quarters from adult offenders. The procedure recommended by the Children's Bureau calls for the detention of juveniles only when their release to their parents is not feasible, for planning to keep the length of detention to a minimum, and for the use of detention quarters entirely apart from those used for adults, preferably a carefully selected foster home or boarding home, or, if the community is large enough, a special detention home.

Wholesome recreation is one of the most important factors in preventing juvenile delinquency. Yet recreation facilities in war-affected communities where population had increased rapidly were reported to be limited, as a rule. In one shipbuilding center where the Children's Bureau made a recent study of recreation facilities a housing project of 5,200 family units was found where there were no leveled playgrounds, no suitable community center, and too few recreation leaders. Some communities with sound representative leadership, on the other hand, built up well-rounded programs of recreation and informal educational activities which included full utilization of school buildings, parks and playgrounds, park areas, community centers, museums, and libraries; the development of public recreation resources; varied activities conducted by youth-serving agencies, settlements, and churches; and wholesome use of commercial recreation facilities under proper control.

Great Britain. In Britain juvenile delinquency, which had increased sharply in the early years of the war, had begun to decline by the end of 1941. Figures released by the British Information Services in July, 1943, show that the total number of children under 16 charged with indictable offenses, which rose from 29,123 in 1939 to 38,688 in 1940 and 44,298 in 1941, fell to 37,846 in 1942. (All figures are for 12-month periods ending August 31 of each year.) The decrease applied both to children 8 to 14 years of age and to young persons 14 to 16, but was much greater for boys than for girls. The causes of wartime juvenile delinquency in Britain are given as the opportunities for unlawful acts afforded by the prolonged blackout; dislocations of home life, including mass evacuation of school children from London, destruction of homes in target areas, shelter life, absence of parents in the services and on war work; war-time restlessness; disruption of school life; high wages, often due to exceptionally long hours, obtained by many boys and girls inexperienced in self-direction; and delay in admitting young people to congested remedial institutions. Foremost among the measures credited with the reduction in juvenile delinquency are the reopening of most schools in 1941, the swing over from deterrent punishment of young offenders to remedial care, reduction of working hours, and the National Youth Movement developed by the Board of Education and the Department of Education for Scotland with the cooperation of the juvenile courts, the churches, the youth-serving agencies, the several branches of the armed forces, and the trade unions. The Youth

Service programs include recreation, vocational training, and pre-service training.

American Republics. No increase in delinquency in the other American Republics is evident from available reports, which deal mostly with measures for improving treatment of juvenile delinquents. In Buenos Aires, Argentina, the Government appropriations for the employment of probation officers, men and women, in the juvenile court have been increased, with a consequent decrease in the number of unpaid volunteers. In Brazil, where juvenile courts have been organized in several States under State law, the National Children's Bureau in 1943 announced a nationwide program which calls for the establishment of local child-welfare boards. These boards are to cooperate with the juvenile courts and police authorities and to provide greater funds and better facilities for the work of the courts. In Chile, the child-welfare law of 1928, under which juvenile courts were established in a few cities, was amended to provide for their establishment elsewhere: in places not served by juvenile courts, a judge of the regular court is to be assigned to hear children's cases. A committee to study juvenile delinquency was appointed by the Minister of the Interior. In Venezuela, a Division of Social Service, directed by a social worker, was established in 1942 in the juvenile court of Caracas, the capital, by order of the Venezuelan Council of the Child, official agency in charge of social services for mothers and children. See *CHILDREN'S BUREAU*.

See *LUTHERAN CHURCH; STATE LEGISLATION under Social Legislation*. Compare *PRISONS*.

KATHARINE F. LENROOT.

KAMCHATKA. See *UNION OF SOVIET SOCIALIST REPUBLICS under History*.

KANSAS. A west north central State. Area: 82,276 sq. mi. Population: 1,801,028 (1940 census); 1,707,499 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. *AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS*. The census of manufactures has been suspended for the time being; for the latest information, see 1941 *YEAR BOOK*, p. 430.

Elections. See the article *ELECTIONS IN THE UNITED STATES*; also, for incumbents, *HOUSE OF REPRESENTATIVES and SENATE*.

Legislation. See the separate article on *STATE LEGISLATION*.

Officers. The Governor is Andrew Schoeppel (Rep.), inaugurated in January, 1943, for a two-year term; Lieutenant Governor, Jess C. Denious; Secretary of State, Frank J. Ryan; Attorney General, A. B. Mitchell. See *FLOODS*.

KARAFUTO. The Japanese part (south of 50° N.) of Sakhalin island, separated from Japan by the strait of La Pérouse. Area, 13,935 square miles. Population (census of October, 1940), 414,891. Chief towns (Jan. 1, 1938 populations): Toyohara, the capital, 37,365; Esutoru, 31,959; Shikka, 24,399; Otomari, 24,269. Chief products: paper, fish, coal, and petroleum. Trade (1937): ¥59,403,628 for imports and ¥121,372,966 for exports (yen averaged \$0.2879 for 1937; \$0.2344, 1940). Budget (1940-41): ¥66,971,457. The administration of Karafuto was unified with that of Japan in 1942.

KARELIA. See FINLAND under *History*.

KAZAKH SOVIET SOCIALIST REPUBLIC. See UNION OF SOVIET SOCIALIST REPUBLICS, *Area and Population*.

KEDAH. See BRITISH MALAYA; THAILAND.

KEEWATIN. See NORTHWEST TERRITORIES.

KELANTAN. See BRITISH MALAYA; THAILAND.

KELLOGG FOUNDATION. See PHILANTHROPY under *Foundation Activities*.

KEMPOL. See RUBBER.

KENTUCKY. An east south central State. Area: 40,-395 sq. mi. Population: 2,845,627 (1940 census); 2,579,486 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS in THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Simeon S. Willis (Rep.), inaugurated in December, 1943, for a four-year term; Lieutenant Governor, K. H. Tugle; Secretary of State, C. K. O'Connell; Attorney General, E. S. Dummitt. See ELECTIONS.

KENYA. A colony and protectorate of British East Africa. Area, 224,960 square miles. Population (1940 estimate), 3,534,862, including 3,447,706 natives, 44,240 Asiatics, 24,596 Europeans, and 15,857 Arabs. Chief towns: Nairobi (capital), 61,300 inhabitants; Mombasa, 50,000; Nakuru; Kisumu. Education (1940): 2,233 schools of all kinds. The amount spent by the government on African education during 1942 £86,000.

Production and Trade. The principal products include cotton, maize, cottonseed, sugar (19,500 tons, 1941), coffee (18,500 tons, 1941), sisal, pyrethrum, tea, timber (2,204,000 cu. ft., 1941), sodium carbonate (24,827 tons, 1940), wattle, and gold (77,243 fine oz., 1940). Other products are groundnuts, sesame, coconuts, tobacco, potatoes, essential oils, cashew nuts, dairy products, wool, and hides. Livestock, European owned (1938): 497,478 cattle, 563,049 sheep, and 13,192 swine. Kenya and Uganda are one administrative unit for customs purposes. Trade (1941): imports £8,085,000; exports £4,739,000. In 1941 reexports from both Kenya and Uganda were valued at £3,494,000. Kenya's chief exports were gold, pyrethrum, coffee, tea, and sisal. The main imports were cotton manufactures, foodstuffs, fuel oil, gasoline, coal, machinery, wearing apparel, and motor vehicles.

Communications. During 1941 the state-owned railways carried 1,706,416 tons of freight and 1,643,186 passengers, exclusive of 35,056 European troops and 45,090 European prisoners of war carried by special arrangement. Roads (1940): 16,537 miles. Telegraph and telephone lines (1940): 18,-985 miles.

Finance. The largest appropriation (£4,867,000) in Kenya's history was authorized to defray expenditure for 1943. This was exclusive of supplementary appropriations. Debt service in 1943 required £1,178,000, which was 5.5 per cent more than the amount so authorized in 1942.

Government. The executive power is vested in a governor, assisted by an executive council. There

is a legislative council of 41 members (the Governor as president, 11 ex-officio, 12 nominated, and 17 elected). By the Kenya Annexation Order in Council, 1920, the territories of the mainland, excluding the mainland dominions of the Sultan of Zanzibar, were recognized as a colony; the coastal belt rented from the Sultan of Zanzibar remains a protectorate. Governor and Commander in Chief, Sir Henry Moore (appointed Oct. 26, 1939).

History. During 1943 the conscription of Kenya's European women was applied to the age groups of 18 to 21. In September East African troops were reported to have left Nairobi for India and Ceylon.

KERATOCONJUNCTIVITIS. See MEDICINE.

KEYNES PLAN. See POSTWAR PLANNING.

KIDNAPING. See FEDERAL BUREAU OF INVESTIGATION.

KINGMAN REEF. An atoll in the Pacific Ocean 1,067 miles southwest of Honolulu, Hawaii; owned by the United States. The reef is about eight miles long and the lagoon is about five miles wide, but only a small area of land remains uncovered at high tide. The atoll was occupied temporarily by a Pan American Airways crew in 1936-37. Effective May 15, 1941, President Roosevelt proclaimed it a naval defensive area. The Navy Department has jurisdiction over the atoll, which is useful as an outpost of the nearby naval air station at Palmyra (q.v.) and as an alternative way-station on the Honolulu-Pago Pago air route.

KIRGHIZ SOVIET SOCIALIST REPUBLIC. See UNION OF SOVIET SOCIALIST REPUBLICS under *Area and Population*.

KISKA. See WORLD WAR under *The War in the Pacific*.

KODACHROME, KODACOLOR AERO, KOTAVACHROME. See PHOTOGRAPHY.

KOREA (CHOSEN). A former empire of eastern Asia, annexed by Japan on Aug. 22, 1910, and incorporated as an integral part of the Japanese empire in 1919. Capital, Keijo (Seoul).

Area and Population. Area, 85,246 square miles. Population, 24,326,327 at census of Oct. 1, 1940. The racial division of the population on Jan. 1, 1939, was: Koreans, 21,950,716; Japanese, 633,320; foreigners (mostly Chinese), 94,815. Populations of the chief cities on Jan. 1, 1939, were: Keijo (Seoul), 706,396; Heijo (Pyeng-Yang), 185,419; Taikyu, 110,866; Jinsen (Chemulpo), 102,473. The Koreans have their own spoken and written language, but Japanese is the language of the government.

Education and Religion. About 60 per cent of all adults are illiterate. As of Jan. 1, 1939, there were 499,300 Christians, 286,000 Buddhists, and about 105,000 adherents of Shintoism, which is supported by the government. Confucianism and ancestor worship are widely practiced. In 1940 the Christian denominations were brought under rigid government control.

Production. Over three-fourths of the working population is engaged in agriculture and forestry. About one-fourth of the cultivated area is devoted to rice (3,995,400 metric tons produced in 1940-41). Yields of other crops in 1939, except as stated, were: Barley, 37,549,620 bu. in 1940; millet, 25,-977,578 bu.; soybeans, 19,184,462 bu.; rye, 14,858,-612 bu.; wheat, 12,358,157 bu.; cotton, 157,752,-637 lb.; silk cocoons, 22,713,000 kilos in 1940. In 1939 there were 1,705,000 cattle, 1,400,000 swine, 51,000 horses, and 20,000 sheep. Fisheries produc-

tion in 1940 was valued at 151,090,000 yen; mineral and metallurgical production (1936), 110,429,655 yen, chiefly in gold, coal, pig iron, and steel. Other leading industrial products are textiles, paper, pottery, metal ware, and tobacco products.

Foreign Trade. Korea's merchandise trade with other parts of the Japanese Empire during the first 10 months of 1940 was: Imports, 1,121,900,000 yen; exports, 614,100,000 yen. Merchandise trade with foreign countries during the first nine months of 1940 was: Imports, 168,200,000 yen; exports, 150,700,000 yen. The chief exports are rice, fertilizer, crude copper containing gold and silver, raw silk, and soybeans.

Finance. Budget estimates for the fiscal year ended Mar. 31, 1942, placed both receipts and expenditures at 1,012,577,000 yen. The public debt on Mar. 31, 1938, was 593,546,214 yen. The yen exchanged at \$0.2596 in 1939, \$0.2344 in 1940, and \$0.2344 for the first seven months of 1941.

Transportation. Railways extended about 3,345 miles on Jan. 1, 1941 (state lines, 2,469; private, 876). Highways extended 19,048 miles in 1940. Air lines linked Keijo with the other chief cities of Korea, Japan, Manchoukuo, and North China. Shipping entering the open ports in 1938 totaled 14,677,742 tons.

Government. Korea was ruled by a Governor-General appointed by the Emperor of Japan until October, 1942, when its administration was unified with that of Japan proper and placed under the jurisdiction of the Japanese Home Minister. A Korean "provisional government" and "restoration army" were established in Chungking in 1940. The joint communiqué issued Dec. 1, 1943, following the Cairo conference of President Roosevelt, Prime Minister Churchill, and Gen. Chiang Kai-shek, declared that the United States, Britain, and China "mindful of the enslavement of the people of Korea, are determined that in due course Korea shall become free and independent." See JAPAN.

KOROSEAL. See RUBBER.

KOS. See GREECE under *History*; WORLD WAR under *The Balkans*.

KOWEIT. See ARABIA under *Kuwait*.

KUHN CASE. See LAW under *War Decisions*.

KUOMINTANG. See CHINA under *History*.

KUSAIE. A Japanese island in the eastern Carolines of the Japanese Pacific Islands (q.v.). Area, 45 square miles. There is a fine harbor with large commercial piers. The island was reported to be a base for Japanese armed forces.

KWANGCHOWAN (KWANGCHOW). See FRENCH INDO-CHINA.

KWANTUNG. The territory occupying the southern part of the Liaotung Peninsula in Manchuria, leased from China by Japan. Area, including 40 adjacent islands, 1,337 square miles. Population (census of October, 1940), 1,367,334. Chief towns (1938 populations): Dairen, 515,743; Port Arthur (Ryojun), 145,286; Pulantien; Kinchow. The chief industries are agriculture, fishing, and salt manufacture. Trade (1937): imports Y680,061,785; exports Y451,798,860 (yen averaged \$0.2879 for 1937; \$0.2344, 1940). Budget (1940-41): Y57,300,655. In December, 1934, the Kwantung Government was replaced by the Kwantung Bureau and subordinated to the Japanese Embassy. See MANCHUKUO.

LABOR, U.S. Department of. A Department of the U.S. Government which in 1943 consisted of the following principal bureaus and divisions:

Bureau of Labor Statistics
Children's Bureau
Division of Labor Standards
U.S. Conciliation Service
Wage and Hour and Public Contract Divisions
Women's Bureau

A wartime Committee on Conservation of Manpower in Industry has been set up to advise on industrial accidents and health exposures and on what can be done to control or eliminate them. The Secretary of Labor in 1942 was Frances Perkins. See the articles on the separate branches. See LIVING COSTS AND STANDARDS for the report of Cost of Living Division. For reports on Cooperation see CONSUMERS' COOPERATIVES.

LABOR CONDITIONS. The greater degree of government control of labor relations noted last year was intensified in 1943. Wages and working conditions were more directly fixed by government agencies, and employers were prohibited from increasing or decreasing rates of pay without government approval. During the year grounds for approval of wage increases were strictly limited. Longer working hours were imposed by government order on various industries and industrial areas, and regulations of working conditions for women and children were frequently eased to obtain necessary help. There was also more strict government control of hiring and in areas where manpower shortages were critical, labor was allocated on the basis of labor priorities for the more essential industries. Quitting or changing jobs by employees was more strictly controlled. Added restrictions on the right to strike were imposed, but the number of strikes increased markedly. In the United States strong resistance to the government controls developed during the year among workers and labor organizations. Numerous work stoppages, unauthorized by the unions, were directed against delayed handling of cases by government agencies. The United Mine Workers and the C.I.O. unions, led by the Steel Workers, were in open revolt against the wage stabilization program, and as the year ended the Government took over the operation of the railroads to prevent a strike called by the railway brotherhoods against what they considered arbitrary rulings of the stabilization director.

Employment and Unemployment. At the end of 1943 the employed civilian labor force in the United States aggregated approximately 52,600,000. Em-

ESTIMATES OF THE CIVILIAN LABOR FORCE, AGRICULTURAL AND NONAGRICULTURAL EMPLOYMENT, AND UNEMPLOYMENT IN THE UNITED STATES, APRIL 1940, OCTOBER 1941, 1942, AND 1943

(Millions of persons 14 years and older)				
	April, 1940	October, 1941	October, 1942	October, 1943
Labor Market Status and Sex				
Total labor force ^a	53.9	54.1	54.0	52.6
Employed ^a	45.1	50.2	52.4	51.9
Nonagricultural industries	36.1	40.9	41.9	41.2
Male.....	^b	29.6	29.2	26.7
Female.....	^b	11.3	12.7	14.5
Agriculture.....	9.0	9.3	10.5	10.7
Male.....	^b	8.3	8.9	8.8
Female.....	^b	1.0	1.6	1.9
Unemployed.....	8.8	3.9	1.6	0.7
Male.....	6.5	2.5	0.9	0.4
Female.....	2.3	1.4	0.7	0.3

^a Excludes institutional population and armed forces.

^b Not available.

Source: U.S. Dept. of Commerce, Bureau of the Census.

ployment in nonagricultural industries totaled 41,200,000 of whom 26,700,000 were men and 14,500,000 were women. Farm employment averaged slightly higher than in 1942 due primarily to an increase in the employment of women. In nonagricultural industries almost 2,000,000 more women

were employed in 1943 than the preceding year. Unemployment declined throughout 1943 and at the year's end totaled about 700,000, or less than half as many persons as in the latter part of 1942. In April, 1940, 16 per cent of the nation's labor force were idle. By the end of 1943 less than 2 per cent of the labor force were jobless.

Production of ships, planes, tanks, and other "heavy goods" war materiel continued to drain workers from factories producing luxury and non-essential civilian goods. At the end of 1943 approximately 8,400,000 or 60 per cent of the nation's 14,000,000 factory wage earners were employed in the durable goods industries where the bulk of the war output was centered. Government employment—Federal, State, and local—declined slightly toward the close of the year after reaching an all-time peak of nearly 6,000,000 or about one-third greater than in 1939. The number of workers in the building trades declined from about 2,200,000 to slightly more than 1,000,000 as the peak of war plant construction passed.

Acute shortages of workers for war and civilian industries led the War Manpower Commission and the War Production Board (qq.v.) in September to authorize establishment of Manpower Priorities Committees in various regions to work out procedures for the referral of workers by public employment offices to industries most urgently in need of additional labor. These procedures received their first trial on the West Coast where war production was falling behind schedule. Early in December the War Manpower Commission announced that the West Coast program had made possible a more accurate channeling of workers and reduced by 97,000 the labor requirements of shipyards in the area. Foreign workers, principally Mexicans, were brought into the country and prisoners of war and troops were also used for certain types of work.

The manpower needs of agriculture reached an acute stage in the spring as inductions into the armed forces and attractive wages in war plants siphoned off many farm hands until farmers of draft age were exempted from military service. Severe local labor shortages were relieved by the importation of about 70,000 Mexican, Jamaican, and Bahaman agricultural workers, the use of troops, and war prisoners.

In Great Britain controls over civilian manpower were tightened still further and plans were formulated late in the year for the conscription of young men to work in coal mines. The aircraft industry experienced increasing difficulty in securing an adequate supply of workers and reported a shortage of supervisory and technical personnel. The number of unemployed declined from 116,000 in July, 1942, to 86,000 a year later.

In Canada, out of a total population of 8,720,000 men and women aged 14 and over, approximately 5,000,000 or about 60 per cent were at work or in the armed services. This represented an increase of about 1,000,000 since the outbreak of the war. According to trade union records unemployment in Canada declined to 0.3 per cent of a reported membership of nearly 500,000.

In Russia no shortage of unskilled labor developed but skilled labor continued to be in great demand. Soviet wartime manpower policy has concentrated upon regulating hiring practices rather than the formulation of policies of controlled labor allocation. A system of inter-industry clearance and reallocation of employed workers, integrated with national production planning has sufficed to solve most skilled-labor bottlenecks in war produc-

tion which extensive training of youth and women could not eliminate.

A study by the International Labor Office estimated that more than 30,000,000 men, women, and children have been torn from their homes and their native soil in Europe since the beginning of the war. Another survey estimated that within "Greater Germany," i.e. prewar Germany, Austria, Sudetenland, and parts of Czechoslovakia and Poland, 12,000,000 foreign workers were laboring under the Nazi yoke. Another 12,000,000 workers were estimated to be harnessed to the German war machine in the conquered countries.

See BUSINESS REVIEW under *Employment*; POST-WAR PLANNING; articles on various branches of industry, as FOOD INDUSTRY, MOTOR VEHICLES, SHIP-BUILDING, also, the topics listed under MANPOWER SHORTAGES.

Women Workers. Increasing numbers of women were brought into the employed labor force of virtually all the countries actively engaged in the war. Where the need of additional manpower was extremely critical—as in England and Nazi-held territory—women were conscripted for civilian and even military duties. It was estimated that the German labor force included about 15,000,000 women. Thousands of Polish and Ukrainian women were taken into Germany by the Nazis for domestic servants, thereby relieving German domestics for work in armament factories. In England further registrations brought all women up to 50 years of age subject to the Government's program of labor conscription. Over 2,500,000 married women and 600,000 part-time women workers were included in the labor force. Women were needed especially for work in aircraft factories, textile mills, and as nurses. In Canada, between 400,000 and 500,000 women were recruited for jobs by employment offices during the past year. Women constituted more than 80 per cent of all workers in instrument factories, about two-thirds of the small arms workers and over one-fourth of all aircraft employees. Women were building ships on both the Canadian East and West Coasts and, for the first time, took up jobs in steel mills.

Within the United States women continued to enter war industries in large numbers. The total number of women in nonagricultural industries rose by almost 2,000,000 in 1943, and was more than 3,000,000 larger than in 1941 when the United States entered the war. By the end of 1943 approximately 5,000,000 more women workers were employed than in June, 1940. The proportion of women in the employed labor force rose from 23.5 per cent in June, 1940, to about 32 per cent in the fall of 1943. Over the same interval the number of unemployed women declined from 2,700,000 to 300,000—a drop of nearly 80 per cent.

The widespread use of women in industry helped them attain an employment status more nearly comparable to that of men. The National War Labor Board (General Order 16) declared that adjustments which equalized the wage or salary rates paid to women with the rates paid to men for comparable quality and quantity of work on the same or similar operations could be made by employers without Board approval. Although this order was issued Nov. 24, 1942, the full effect of it was not felt until 1943. Women were also accorded greater responsibilities in trade union matters; many assumed posts of leadership in local unions and served as delegates to conventions.

While some States revised their minimum wage orders to compensate women workers for higher living costs, more than half of the States with

minimum wage laws on their statute books had not made any wartime upward adjustment of their minimum wage rates. Restrictions on daily or weekly hours of work, on the other hand, were eased in a number of instances and work standards were sometimes disregarded. Longer hours, shortened rest periods, pressure for increased production, overcrowding within the shop, and use of makeshift toilet facilities were factors contributing to greater hazards of employment. Dermatitis and occupational poisoning were among the most frequent causes of industrial illness, while relatively higher rates of absenteeism for women in some industries were due to poor working conditions. As a means of promoting better work standards for women, a conference on Employment of Women in Wartime, called by the Secretary of Labor in the spring of 1943, stressed observance of a maximum 8-hour day and 48-hour week, one day of rest in seven, adequate rest and meal periods, and proper safeguards for health and safety. See WOMEN'S BUREAU; STATE LEGISLATION under Labor.

Child Labor. Attractive wages, acute shortages of adult workers, and some relaxation in measures safeguarding the employment of minors combined to bring approximately 5,000,000 boys and girls from the ages of 14 through 17 into the United States labor force in the peak month of July, 1943. With the end of the summer vacation period the number of employed youth dropped to an estimated 2,750,000 working full or part time. In April, 1940, the Census showed only 872,000 children 14 to 17 at work; of these 416,000 were in industry and the remainder were on farms. In the first 6 months of 1943 more than twice as many employment or age certificates were issued to minors under 18 as in the same period of 1942.

The child labor provisions of the Fair Labor Standards Act, administered by the U.S. Children's Bureau, served as a partial bulwark against unnecessary and unconscionable employment of boys and girls, particularly of youth under 16 years of age. National policies defining the wartime production role of children under 18 were formulated by Federal agencies including the War Manpower Commission, Office of Education, Department of Agriculture, and the Office of Civilian Defense with a view to safeguarding the health and educational opportunities of employed youth. The policies thus established required observance of State and Federal labor standards, a minimum age of 14 years for either full-time or part-time employment, of 16 for factory employment, and of 18 for hazardous work. A ceiling of an 8-hour day, 48-hour and 6-day week was also placed upon the employment of minors under 18. Despite these efforts greater risks were encountered by boys and girls in assuming hazardous jobs and working long hours. School work was interrupted if not terminated for many, and juvenile delinquency (q.v.) assumed serious proportions. See CHILDREN'S BUREAU under Child Labor; STATE LEGISLATION (also for student work).

In Great Britain special registrations were held for youths of 16 and 17 under arrangements made by the Youth Service Committee of the Education Authorities. Most boys and girls were leaving school at the age of 14, and about 77 per cent of the boys and 67 per cent of the girls from 14 to 18 had full-time jobs. To safeguard their welfare and encourage further educational advancement, various steps were taken by public authorities to reduce the hours of work of young persons and to provide them with technical and vocational training.

The Argentine Government granted authoriza-

tion for children over 14 to work eight hours daily "under certain conditions" in contrast to previous legislation providing for a maximum workday of 6 hours for minors under 18 years of age. Brazil established a special section in its National Labor Department to promote the welfare of women and children employed in industry.

Hours of Work. In the United States the general tendency toward longer hours was stimulated by the issuance on Feb. 9, 1943, of Executive Order 9301, which provided for the establishment of a 48-hour minimum workweek as part of "the fullest mobilization" of manpower in areas and industries designated by the War Manpower Commission. At that time, while most basic war industries were on 48-hour schedules, some, like steel, were on 40-hour shifts, and coal mining had a 35-hour week. Many industries providing civilian goods or services were averaging less than 40 hours. The Commission initially designated 32 local labor-shortage areas as subject to the Executive Order, and applied it nationally also to the lumber and nonferrous metal mining industries. In August the steel industry was placed on a minimum 48-hour week, and the equivalent of 50,000 workers were thereby added to the labor force.

According to the Secretary of Labor, ten million additional hours were devoted to the manufacture of war supplies in October, 1943, seven million of which were the result of a longer workweek. The average weekly hours of work for all factory wage earners combined was 45.4 in October, 1943, or 2 hours per week greater than a year earlier. Scheduled hours of work were, of course, higher. In several of the war industries—machine tools and scientific instruments, for example—the average workweek approximated 50 hours, but in some nondurable goods industries, hours in the autumn of 1943 still averaged less than 40 per week. In coal mining, an agreement was reached to work 48 hours a week instead of 35. In the railroad industry average hours worked substantially exceeded the scheduled 48-hour workweek.

In Great Britain, working hours rose to 70, 80, and even 90 in 1940, but the Government recognized that this pace could not be continued indefinitely and urged that workweeks no longer than 60 hours for men and 55 hours for women be observed. No statistics are available showing the average actual workweek, including overtime, for all British industries. In industries and enterprises where a 3-shift system is worked, the weekly hours are, in general, 48. Under a 2-shift system many workers have a scheduled 56-hour week. Hours actually worked are shorter than scheduled working time due to absenteeism and other causes. See WAGE AND HOUR DIVISION; STATE LEGISLATION (for night work, day of rest, meal periods, etc.)

Wages. Wages in the United States continued to move upward during 1943. From October, 1942, to October, 1943—the first full year under the Government's Wage and Salary Stabilization Program—average hourly earnings of all factory workers advanced nearly 11 per cent, or to 99 cents per hour. Weekly earnings over the same period rose 15 per cent to an average of \$44.90. In the large war-producing durable goods industries, wage earners averaged \$1.09 per hour (including overtime payments) and \$51.50 per week in October, 1943. Earnings exceeded \$60 per week for workers employed in aircraft plants, shipyards, and a few other key war industries. On the other hand, the weekly wage income of many workers in various branches of the textile and apparel industries averaged less than \$25 per week. Among the

nonmanufacturing industries weekly wages ranged from an average of slightly more than \$21 for year-round hotel workers and retail general merchandise clerks to \$46 for bituminous coal miners, and over \$50 for building construction workers and employees in crude petroleum production.

Over the entire war period, from September, 1939, to the autumn of 1943, average hourly earnings of factory workers advanced from 63 cents to 99 cents—an increase of 36 cents or 57 per cent. Weekly earnings over the same interval climbed from \$23.93 to \$44.90. This was a gain of \$21 or 88 per cent. This rise in earnings was due to a combination of factors, the most important of which were fuller employment, longer hours of work, overtime payments at penalty rates, and increases in basic rates of pay. A study by the Bureau of Labor Statistics of the upward movement of factory wage rates between January, 1941, and June, 1943, revealed that the proportion of workers earning less than 50 cents an hour had declined from 31 per cent to 10 per cent, while the proportion receiving \$1.00 or more per hour had increased from 12 per cent to 31 per cent.

ESTIMATED DISTRIBUTION OF FACTORY WORKERS JANUARY, 1941, AND JUNE, 1943

Hourly Rate (Cents)	June, 1943 Number of workers	Per Cent	January, 1941 Number of workers	Per Cent
Under 40.....	220,000	2	1,580,000	17
40 and under 50....	1,050,000	8	1,390,000	14
50 and under 60....	1,645,000	12	1,450,000	15
60 and under 70....	1,530,000	11	1,460,000	15
70 and under 80....	1,700,000	12	1,140,000	12
80 and under 90....	1,820,000	13	870,000	9
90 and under 100....	1,580,000	11	620,000	6
100 and under 110....	1,230,000	9	460,000	5
110 and under 120....	960,000	7	280,000	3
120 and under 130....	930,000	7	330,000	4
130 and under 140....	470,000	3	"	"
140 and under 150....	320,000	2	"	"
150 and over.....	370,000	3	"	"
Total.....	13,820,000	100	9,580,000	100

* Included in "120 and under 130 cents" class; the number of workers receiving 120 cents or more was too small to permit further subdivision.

Source: U.S. Bureau of Labor Statistics.

Government controls over wages were tightened during the year. In April the President issued his "Hold-the-Line Order," which froze existing wage rates, except for permissible cost-of-living adjustments within the Little Steel Formula and to correct substandards of living. A month later in a "clarifying directive," the Stabilization Director eased the restrictions somewhat by authorizing, in addition, limited increases to eliminate gross inequities or to aid in the effective prosecution of the war. The wage stabilization policy is directed exclusively to the control of basic hourly rates of pay, not over-all or "take home" earnings. The National War Labor Board estimated that its decisions had increased basic wage rates of factory workers only 1.2 cents per hour during the first year of the stabilization program, but gross average hourly earnings increased 11 cents. See ECONOMIC STABILIZATION, OFFICE OF; NATIONAL WAR LABOR BOARD; WAGE AND HOUR DIVISION.

Toward the end of the year protests of labor organizations that wages were being kept down while prices and cost of living continued to rise, led the President to appoint a committee of public, labor, and industry members to study the cost of living and its relationship to wage rates. The Secretary of Labor announced that cost of living had risen only 3½ per cent in 1943, as compared with 9 per cent the preceding year and 10 per cent in

1941. Since the outbreak of the war the cost-of-living index has risen approximately 25 per cent. Although "take home" weekly wages and, in most industries, even straight-time hourly earnings have exceeded these increases in cost of living, the labor organizations questioned the accuracy of the index, and at the end of the year a number of large unions were seeking additional increases to offset the rise in living costs (q.v.).

In Canada, factory weekly earnings of \$32 in September, 1943, were about \$2.30 or 8 per cent higher than a year earlier. They averaged \$6.44 per week or 25 per cent higher than in June, 1941. The Canadian National War Labor Board ordered an increase in the cost-of-living bonus effective from the first payroll period beginning on or after Nov. 15, 1943. Previous increases had brought the total amount of the bonus up to \$4.25 a week. The final increase raised it to \$4.60. In December, however, under government order the cost-of-living bonus was added to and became a part of basic wage rates. The government announced that no further bonuses would be paid but that if the cost of living should rise more than 3 per cent and remain at that level for two consecutive months the entire program of price control would be reviewed and appropriate action taken.

Between October, 1938, and January, 1943, weekly earnings of a broad section of British manufacturing and nonmanufacturing workers advanced 65 per cent. Further small increases in earnings were recorded during 1943. Wage rates, as contrasted to earnings, rose about 5 per cent between mid-1942 and the fall of 1943, and averaged about 36 per cent higher than at the outbreak of war in Europe in 1939. See specific subjects for wage rates, as CIVIL SERVICE, NEWSPAPERS, MOTOR VEHICLES; also below under *Women Workers*.

Strikes. More strikes occurred and more workers went on strike in the United States during 1943 than in 1942, and time lost by strikes mounted to 13½ million work-days, more than 200 per cent over 1942. Even after allowance for the separate counting of each of four bituminous coal strikes, the data show a greater amount of labor unrest than in any of the four preceding years, except 1941. Canada and Great Britain likewise experienced an increasing number of work stoppages. In each of these countries the number of strikes and lockouts rose above any previous war year, and the time lost due to stoppages also exceeded that of any year since hostilities broke out in Europe.

STRIKES IN UNITED STATES, CANADA, AND GREAT BRITAIN, 1939 TO 1943

Country and Year	Strikes	Workers Involved	Man-Days Idle
United States ^a			
1943.....	3,750	1,900,000	13,500,000
1942.....	2,968	840,000	4,180,000
1941.....	4,288	2,363,000	23,050,000
1940.....	2,508	577,000	6,700,000
1939.....	2,613	1,171,000	17,810,000
Canada ^b			
1943.....	443	231,400	1,030,000
1942.....	354	114,000	450,000
1941.....	231	87,000	434,000
1940.....	168	60,600	268,000
1939.....	122	41,000	225,000
Great Britain ^c			
1943.....	1,775	559,000	1,810,000
1942.....	1,303	457,000	1,530,000
1941.....	1,251	360,000	1,080,000
1940.....	922	299,000	940,000
1939.....	940	337,000	1,360,000

^a U.S. Bureau of Labor Statistics. ^b Canadian Labor Gazette. ^c British Ministry of Labor Gazette.

Outstanding among the strikes occurring in the United States during the year were the four rela-

tively short but widespread work stoppages of bituminous coal miners which took place between April and November, 1943, and a strike of anthracite workers in the spring. Between 400,000 and 500,000 miners ceased work at one time or another as union leaders, coal operators, and government agencies attempted to find a formula for settling the wage issues. (See COAL; HEATING.) At Christmas time about 150,000 steel workers whose contracts had expired remained away from the mills until assured by the Government that wage increases resulting from negotiations would be made retroactive. (See IRON AND STEEL.) The first "cut-back" strike came in December when nearly 600 workers opposed a labor force reduction occasioned by the loss of war orders by a steel plant. (See RAILWAYS; NEWSPAPERS, and, for Petrillo's ban on recordings, MUSIC; NLRB; NATIONAL WAR LABOR BOARD; UNITED STATES under *The Domestic Front*; sections below.)

In Great Britain, strikes in the coal mining industry also were a major disturbing factor on the labor front. Most of these strikes involved wage issues, although a number of stoppages arose out of sympathy for employees who had been prosecuted for absenteeism, for refusing to work underground, or for breaches in regulations. Shipbuilding, engineering, and other metal industries also experienced a relatively large number of strikes. Strikes in Canada involved workers in a number of important war industries including shipbuilding, steel, rubber, and aluminum. In December, Montreal experienced two brief strikes of public employees—police, fire, and public works employees, and city hall white-collar workers. Textile workers in Mexico quit their jobs in December demanding pay increases ranging up to 20 per cent. Argentine labor organizations staged a 24-hour nationwide strike early in the year in protest of arrests of union leaders held for activity in support of the cause of the United Nations and for participation in movements to increase wages to meet the rising cost of living. See ARGENTINA, AUSTRALIA, BELGIUM, CANADA, CHILE, COLOMBIA, CUBA, GREAT BRITAIN, GREECE, MEXICO, NETHERLANDS, PORTUGAL under *History*.

Labor Movements. Throughout the free world, workers' organizations faced increasingly complex problems as their traditional rights and conventional practices were curtailed by government action taken to further the war effort and combat inflation on the home front. Rank-and-file restlessness grew during the year, and criticism of failure of governments to keep down prices and profits continued. This was coupled with demands that organized labor be accorded a greater role in war agencies and that it be given a prominent place in the formulation of peace objectives and planning for the postwar world.

Delegates to the 63rd Annual Convention of the American Federation of Labor, held in October, 1943, reaffirmed the Federation's no-strike pledge, denounced proposals calling for the conscription of civilian manpower, and insisted upon more adequate measures of price control and taxation of war profits. The reported membership of 5,939,021 was increased to 6,564,141 during the convention when the International Association of Machinists, which had withdrawn from the A.F.L. earlier in the year voted to reaffiliate. The United Mine Workers—once the leader of the rival C.I.O. movement—also bid for reaffiliation, but acceptance of the bid was delayed because of rival jurisdictions of other A.F.L. unions. With respect to the A.F.L.-C.I.O. schism, the convention continued its unity

committee so that "no opportunity to establish unity may be overlooked," but the unity committees of the two organizations arranged for no further joint meetings. Cooperation with Latin American unions and the British Trades Union Congress was endorsed but the delegates again went on record against direct participation in an Anglo-American-Soviet Russia labor committee.

The Sixth Annual Convention of Congress of Industrial Organizations reported a membership of 5,285,000 organized into 40 national and international unions and organizing committees. The delegates reiterated their "no-strike" pledge, called for a revision of the Government's wage stabilization policies with the elimination of the "Little Steel Formula," and endorsed measures to unite on the political field all the liberal elements of the nation through its Political Action Committee which was created in July. Negro discrimination in American industries was denounced and the poll-tax system condemned. The United Automobile, Aircraft and Agricultural Implement Workers—a C.I.O. affiliate—became the first union in the United States ever to exceed a membership of 1,000,000 workers.

See under SOCIETIES AND ASSOCIATIONS for reports of A.F.L. and C.I.O. See also MUSIC.

The Trades and Labor Congress of Canada in its 59th convention reaffirmed its pledge of support to an all-out war effort but was critical of what it regarded as a lack of government cooperation, particularly as regards labor representation on policy-making bodies. The reported membership was 190,778. The Canadian Congress of Labor—an organization somewhat similar to the C.I.O.—at its fourth convention endorsed the Cooperative Commonwealth Federation as the political arm of labor in Canada. Membership of the Canadian and Catholic Confederation of Labor climbed to about 53,400 in 1943.

Mexico's Confederation of Labor (CTM) held its third congress with nearly 5,700 delegates present representing 1,280,000 workers. The General Confederation of Labor of Argentina submitted to the Argentine Government demands for improved working standards which included a 40-hour week instead of the present 48-hour week, minimum wage and social security legislation, and a greater degree of union participation in agencies regulating commerce and industry. The National Convention of the C.T.C.H., representing over 300,000 Chilean workers, met in Santiago to consider wage and cost-of-living problems. In Costa Rica, the First National Conference of Catholic Workers' Organizations heard the Archbishop of San José declare that "our duty as representatives of Christ is to raise the living standards of the workers in factory, office, and field."

The Executive Committee of the Latin American Confederation of Workers (C.T.A.L.) at a summer meeting in Havana dealt with proposals to waive strike action during the war and to organize a general hemisphere labor conference. In Bolivia the Confederation of Workers demanded an increase in tin prices as a means of raising living standards and in Venezuela a National Oil Workers' Union was formed to push for a broad program of labor reform including better housing and wages. A joint United States-Bolivian Commission, which included representatives of organized labor, investigated working conditions of the tin miners of Bolivia and recommended major labor and economic reforms to curb exploitation of workers and to promote collective bargaining in that country.

British delegates representing an aggregate membership of 6,024,000 met in the 75th Annual Trades Union Congress in September and discussed the role of labor organizations in the war and the peace to follow. They called upon their elected leaders "to give immediate attention to the possibility of convoking a world conference of organized workers, as soon as war conditions permit, with the object of considering the most pressing problems of policy and organization affecting the interests of the working people, and thereby to promote the widest possible unity in aim and action of the international trade union movement." Legislation to put into effect the principles of the Beveridge social insurance plan was urged as the Congress evidenced great interest in all phases of postwar reconstruction.

Membership of 191 unions included in the All India Trade Union Congress aggregated approximately 270,000. The 1943 annual convention of the Congress urged the payment of an adequate cost-of-living bonus to offset rises in prices of goods and services, and labor representation in committees set up to supervise the rationing and control of supplies. The Chinese Labor Association, composed of 48 general labor unions, reported early in 1943 a membership in excess of 400,000. Although working in close cooperation with the Government, the Association has not relinquished the right to strike.

Collective Bargaining and Government Control. The Swedish Employers' Federation and the National Federation of Trade Unions concluded a national collective agreement in December, 1942, laying down basic principles for all collective wage agreements during 1943. Under this agreement wages were not to be increased above the twenty and seven-tenths per cent supplement allowed in 1942 over basic wage rates of 1938, unless the cost of living index should rise 10 points in which event a further five per cent wage supplement would be payable. Such collective bargaining, aided by government mediation and arbitration agencies, has maintained industrial peace without strikes of any importance for many years.

In the United States the wartime "No-Strike Agreement" developed stormy conflicts in 1943 (see above under *Strikes*). At the year's end plans were being discussed for supplanting the agreement by legislation. The agreement authorized the President to appoint the National War Labor Board (q.v.) to hear and decide labor disputes, but laid down no principles or policies, either as to wages or working conditions by which the Board would be governed. When the Wage Stabilization Program was adopted, administration of this program was added to the duties of the Board. Questions of stabilization thus became intermingled with labor disputes and bans on strikes. Both labor policy and stabilization became confused. It became necessary for the Board to set aside or modify collective bargaining agreements when these were in conflict with the stabilization policy. This brought charges from some unions that the Government had changed the no-strike agreement; the coal miners' leaders justified their strikes on this ground. There were also charges that decisions of the War Labor Board were dictated by the Stabilization Director in some cases, and the Railroad Brotherhoods complained that he had set aside wage recommendations of an Emergency Board in contravention of the Railway Labor Act. The President's "Hold-the-Line Order" and delayed handling of cases by the War Labor Board were added sources of dissatisfaction.

All this was reflected in the unrest and work stoppages noted above. In June Congress enacted the Connally-Smith Act restricting the right to strike (see below), but the law had little effect; strikes continued to increase. The President authorized sanctions for enforcement of the War Labor Board's decisions and directive orders, but these measures brought no noticeable results. More and more terms and conditions of employment were fixed by orders of the War Labor Board and the War Manpower Commission, with correspondingly less and less reliance upon the processes of collective bargaining.

Eleven State legislatures adopted measures in 1943 to regulate the activities of labor organizations. (See STATE LEGISLATION.) The Province of Ontario, Canada, passed a law to provide for certification of collective bargaining agencies and to protect the collective bargaining process. A branch of the High Court of Justice—the Labor Court—determines appropriate bargaining units and certifies majority representatives. Refusals to bargain and discrimination are prohibited. The Chinese government, which since August, 1941, has directly supervised labor unions, extended its effective control into 71 localities. Unions must aid the government in stabilizing wages, conscripting labor, and increasing output.

Federal Labor Legislation. The principal piece of labor legislation passed by the Congress of the United States in 1943 was the Connally-Smith Bill, officially known as the War Labor Disputes Act. It was adopted on June 25 over a presidential veto. The law is a composite measure designed in various ways to prevent interruption of wartime production. By the end of the year, however, it was generally conceded that it had failed of its purpose, and proposals for new legislation were being discussed. The War Labor Board was given statutory status by the Act and authority to intervene in labor disputes, to summon the parties, subpoena witnesses, and require the production of papers and records material to the consideration of any dispute. The Board is specifically authorized to decide labor disputes and to provide by order the wages, hours, and all terms and conditions governing the relations between the parties. The law also amends the Federal Corrupt Practices Act of 1925 to prohibit contributions by labor organizations in connection with the election of Federal officials.

The Act authorizes the President to take possession of any plant, mine, or facility which may be required for the war effort, and while it does not deny individuals the right to stop work, it prohibits any person from inducing or aiding in strikes, lock-outs, or other interruptions of production after government possession. When the government takes possession, the terms and conditions of employment are frozen except that application may be made to the War Labor Board for an order to change wages or working conditions, and the Board's order, subject to approval by the President, binds the operating government agency.

For industries in private hands, the Act provides that representatives of employees must give the Government 30 days' notice of any dispute that threatens war production. The National Labor Relations Board is directed to take a secret ballot on the thirtieth day to determine whether the employees "wish to permit an interruption of war production." The results of the ballot must be publicly certified. The National Labor Relations Board reported that by the end of the year 654 notices were received, but 444 were withdrawn before the end of the 30-day period. In 117 cases

the Board took strike ballots and in all but 14 of these the vote was in favor of striking by big majorities. Seven of the 14 ballots which resulted in majorities against a strike were taken in December. Although the votes in more than a hundred cases favored striking, very few of these cases actually resulted in strikes. Notices of intention to strike were given mainly as a means of putting pressure either on the employer or on the Government. Those employees that did engage in strikes usually gave no notice of their intention to interrupt war production.

The National Labor Relations Act was indirectly amended during the year by a provision in connection with its appropriation that no money appropriated shall be used to prosecute complaints against allegedly illegal contracts between employers and labor organizations after such contracts have been in existence for 90 days. The Board itself limited the scope of its activities by a ruling which reversed its previous decisions and held that organizations representing foremen and other supervisory employees would not be certified as collective bargaining agents, and elections to choose representatives of such employees would not be held by the Board. More and more the Labor Relations Act is becoming mainly a vehicle for the determination of representation disputes. Of the more than 9,000 cases received by the Board during the year, two-thirds were representation disputes and only one-third were cases involving unfair labor practices. For several years the proportion of representation cases has been increasing.

The U.S. Supreme Court decided three important cases in November interpreting the Railway Labor Act. It held that determinations in representation proceedings by the National Mediation Board, which administers the Act, are not subject to judicial review, and further that the Courts have no authority to review jurisdictional disputes between unions. The decisions of the Mediation Board in representation cases were given finality on the ground that Congress did not provide that such decisions should be subject to judicial review. Likewise, as to jurisdictional controversies, the Court held that Congress left the final authority of settlement "to agencies or tribunals other than the Courts."

In the Revenue Act of 1943 the House of Representatives inserted a provision requiring labor organizations to submit informational financial reports to the Commissioner of Internal Revenue. At the end of the year the Senate had not yet acted on this provision.

See EDUCATION; UNITED STATES; topics listed under WORKMEN'S COMPENSATION; also, AUSTRALIA, BELGIUM, BOHEMIA AND MORAVIA, BOLIVIA, BRAZIL, CANADA, GREAT BRITAIN, JAPAN, MEXICO, NETHERLANDS; PORTUGAL; PAN AMERICANISM.

WILLIAM M. LEISERSON.

LABOR DRAFT. See COMPULSORY LABOR. For "work or fight" measures in the United States, see STATE LEGISLATION; UNITED STATES under *Armed Forces*, **LABOR PARTY**, British. See GREAT BRITAIN under *History*; **SOCIALISM**.

LABOR SHORTAGES. See MANPOWER.

LABOR STANDARDS, Division of. A Division of the U.S. Department of Labor, organized in 1934, authorized to develop desirable labor standards and to make specific recommendations to improve working conditions and the economic position of wage earners. Director in 1943: Verne A. Zimmer.

LABOR STATISTICS, Bureau of. A Bureau of the U.S. Department of Labor, established in 1913, charged with the duty of acquiring and diffusing information on subjects connected with labor. Information is issued in special bulletins and in the *Monthly Labor Review*. The Commissioner of Labor Statistics in 1943 was Isador Lubin (A. F. Hinrichs, Acting).

LABRADOR. See under NEWFOUNDLAND.

LABUAN. See BRITISH MALAYA.

LACROSSE. The old Indian game flourished in 1943, a year that found many other sports hit hard by the war. When the Intercollegiate Association campaign got under way in early spring, only Hobart and Pennsylvania were missing and Penn continued in the game on a club basis.

A fighting Naval Academy team that refused to quit under fire returned the intercollegiate laurels to the State of Maryland after Princeton had carried them away in 1942. The Middies, renewing their rivalry with Johns Hopkins after 15 years, broke a 4-4 tie in the closing minutes and went on to win, 7-4, then rallied against the University of Maryland for a 9-8 triumph in the last thirty seconds of play. The Annapolis stickmen then clinched the title by coming from behind to conquer their old service foe, Army. Trailing by 4-3 at half-time, the Middies put on a dazzling exhibition of passing to rout the Cadets, 12-5.

In the annual All-Star game, the South's collegians atoned for their setback of the previous season by vanquishing the North, 9-5. St. Paul's of Baltimore dominated the schoolboy picture, being unbeaten in a 13-game campaign.

THOMAS V. HANEY.

LAND ARMY. See UNITED STATES under *Congress*. **LANDING CRAFT AND OPERATIONS.** See COAST GUARD; MILITARY PROGRESS; NAVAL PROGRESS, text and photographs; WORLD WAR.

LANDING FIELDS. See CIVIL AERONAUTICS ADMINISTRATION. For "flight strips" see ROADS AND STREETS.

LAND UTILIZATION, Office of. An office of the U.S. Department of the Interior, created in 1940, which coordinates and integrates the land use and management activities of the Department. Assistant to the Secretary in charge of Land Utilization: Lee Muck.

LANGUAGE STUDIES. See COORDINATOR OF INTER-AMERICAN AFFAIRS; articles on foreign literatures.

LAOS. See FRENCH INDO-CHINA; THAILAND.

LATAKIA. See SYRIA AND LEBANON.

LATIN AMERICA. See articles on the various countries of the Caribbean, Central America, and South America; also ART; BUSINESS REVIEW under *World Business Trends*; COORDINATOR OF INTER-AMERICAN AFFAIRS; PAN AMERICANISM; PAN AMERICAN UNION; SANITATION; SPANISH-AMERICAN LITERATURES; TRADE, FOREIGN; UNITED STATES under *Foreign Relations*; topics listed under INTER-AMERICAN.

LATIN CONFEDERATION OF WORKERS. See LABOR CONDITIONS under *Labor Movements*.

LATVIA. A former Baltic state, which proclaimed its independence from Soviet Russia Nov. 18, 1918. It was reannexed to the U.S.S.R. as a constituent republic Aug. 5, 1940, and occupied by German troops in 1941. Capital, Riga.

Area and Population. Area, 25,402 square miles;

estimated population on Dec. 31, 1939, 1,951,000. About 35 per cent of the population lived in communities of 2,000 or more. The population of Riga in 1939 was 393,211; of other towns at the 1935 census: Liepaja (Libau), 57,098; Daugavpils (Dvinsk), 45,160; Jelgava (Mitau), 34,099.

Education and Religion. At the 1930 census, 13.6 per cent of the population 10 years of age and over were illiterate. According to the 1935 census, 56.13 per cent of the inhabitants were Protestants, 24.45 Roman Catholics, 14.4 per cent Greek Catholics and members of the Orthodox Church, and 4.79 per cent Jews.

Production, etc. Agriculture, stock raising, lumbering, and manufacturing were the principal occupations at the time of the Russian occupation. State and private forests covered 4,817,482 acres. At the beginning of 1939 there were 5,977 industrial enterprises with 98,497 employees, chiefly in metallurgy, textiles, wood-working, foodstuffs, and chemicals. For the available production, trade, and financial statistics, see 1942 YEAR BOOK. At the beginning of 1940 there were about 2,075 miles of railway lines, 58,730 miles of roads, 2,775 miles of inland waterways.

Government. The democratic Constitution adopted by a Constituent Assembly on Feb. 15, 1922, was suspended May 15, 1934, when a *de facto* anti-Communist dictatorship was established by the government headed by Premier Karlis Ulmanis. On Apr. 11, 1936, Dr. Ulmanis assumed the Presidency in addition to the Premiership. On Oct. 5, 1939, the Latvian Government yielded to a Soviet ultimatum and signed a mutual assistance pact authorizing the establishment of Russian military, naval, and air bases in Latvia, but safeguarding the republic's independence. Violating the latter provision, the Soviet Government occupied all of Latvia June 17, 1940. A pro-Soviet regime was set up June 20, and on July 14-15 "managed" elections produced a solidly pro-Communist parliament, which met July 21 and petitioned for Latvia's admission into the Soviet Union. The petition was granted by the Supreme Soviet in Moscow August 5 and ratified by the Latvian parliament August 24-25.

Following the German conquest in June-July, 1941, Latvia was incorporated in the Reich's new Ostland Province as a General District. Otto Drechsler was appointed General Commissar for Latvia (August, 1941) under the direction of Hinrich Lohse, Reich Commissar for the Ostland. The General District of Latvia was subdivided into six Districts, each headed by a German District Commissar. The German Commissars exercised absolute control over political, economic, and cultural affairs. They were assisted by a Latvian puppet administration composed of six "general directors," headed by Gen. Oskars Dankers. This administrative set-up was legalized by the decree of Mar. 18, 1942, issued by Alfred Rosenberg, Hitler's Minister for Occupied Regions in the East. For developments in 1943, see LITHUANIA under *History*.

LAVONGAI. See NEW GUINEA, TERRITORY OF.

LAW. This review is limited to important developments during the past year in judicial decisions, legal procedure, legal education, and jurisprudence. For discussion of legislation and similar topics, the special title involved should be consulted.

War Decisions. The mounting difficulties in Hawaii arising from the continued application of strict martial law to the civilian as well as the military population resulted eventually in a clash between

the judiciary and the military, which is likely to be historic. Objections to the closing of the civil courts and the trial of both criminal and civil matters in the Islands by military tribunals led to negotiations between the War and Interior Departments and the Department of Justice in Washington over a considerable period of time between the Pearl Harbor attack and the beginning of 1943, by which time a substantial modification of many of the restrictions had been agreed upon. Hence by the Governor's public proclamation in February it was provided that judicial proceedings, both criminal and civil, should be resumed except as against members of the armed forces or for violations of military orders. Accordingly Federal District Judge Metzger concluded that the writ of habeas corpus had been restored, and, therefore, granted writs on behalf of two Americans of German descent, Glockner and Seifert, who had long been detained by the military authorities. The commanding general, Lieutenant General Richardson, refused to accept service of the writ (it is said that the deputy marshal was actually ejected by the military police), whereupon the judge fined the general \$5,000 for contempt of court. To this the general responded with a general order forbidding any person connected with any court to apply for, or act with respect to, a writ of habeas corpus and specifically prohibiting the district judge from proceeding in any way with the cases in which the petition had been filed, subject to prosecution before a provost judge and imprisonment for five years or fine not to exceed \$5,000. Nearly two months later, in October, the commanding general rescinded this order (after what are understood to have been extensive negotiations among the Washington departments), the military authorities transported the prisoners to the mainland, where they were released, and the district judge upon motion reduced his fine of the general to \$100. The War Department is said to have strongly urged that the Department of Justice recommend pardon for the general; at any rate, a pardon was lately forthcoming. A statement of some of the problems occasioned by martial law, with references to learned discussions, appears in last year's review on LAW; this particular episode is interestingly related by the American Bar Association's ex-president Armstrong in *Martial Law in Hawaii*, 29 A.B.A.J. 698.

Apparently this is the only substantial rebuff so far suffered by the military from the judiciary in this war. It is true that in the case of *Yasui*, 48 F.Supp. 40 (D. Ore.), a district judge sharply criticized the application of restrictions to American citizens of Japanese descent; but when this case reached the Supreme Court in 320 U.S. 115 and in the companion case of *Hirabayashi v. United States*, 320 U.S. 81, that Court upheld the validity of orders establishing military areas within the Western Defense Command and promulgating a curfew for persons of Japanese ancestry, even including American citizens, as well as the Congressional Act of March 21, 1942, validating these orders. In the case of *Korematsu*, the Court by holding a judgment of probation to be final for purposes of appellate review, 319 U.S. 432, paved the way for the decision of the United States Circuit Court of Appeals for the Ninth Circuit, December 1, sustaining his conviction of violation of the further orders evacuating the Japanese to inland parts of the country. The situation of these Japanese Americans and the hardship of the orders made necessary as to them have caused extensive discussions in the reviews, many of which

were noted in last year's review; among recent articles may be noted those by Messrs. Alexandre and Freeman in 28 *Corn. L. Q.* 385-458, by Professor Cushman in 23 *B. U. L. Rev.* 335, 362, and in 43 *Col. L. Rev.* 949-954.

Presumably the validity of orders setting up the Eastern Defense Command and restricted areas on the Atlantic seaboard will come before the courts for definite adjudication in due course. In *Schueller v. Drum, Lieutenant General*, 51 *F.Supp.* 383 (E.D.Pa.), a district judge in Pennsylvania cast some doubt on at least parts of the orders in giving a declaratory judgment that the plaintiff could not be excluded from the Philadelphia area, while in *United States v. Meyer*, in the District Court for the Southern District of New York and now on appeal, they were sustained by implication at least in the conviction of the defendant for falsely testifying before a military tribunal set up under the orders to pass upon the exclusion of enemy aliens from the restricted area.

Various prosecutions have been had during the year of German nationals or sympathizers for a variety of offenses, in general showing opposition to the war effort. The law of treason has once again become of great importance; and one Max Stephan after a lengthy trial was convicted and sentenced to be executed upon proof that he had lent assistance to further the escape of a German aviator who was fleeing from a Canadian prison camp. Various appeals were prosecuted in his behalf; a final one in the Supreme Court, *Stephan v. United States*, 319 U.S. 423, unsuccessful like the others, recounts and gives references to the earlier proceedings. After legal proceedings had closed, the President commuted his sentence to life imprisonment. In *United States v. Cramer*, 137 F. (2d) 888 (C.C.A.2d)—now before the Supreme Court on grant of certiorari—conviction of Cramer was upheld for treason in assisting one of the German saboteurs landed in this country from a German submarine in June, 1942, the court finding it necessary to redefine the historic provision that conviction shall be had only upon the testimony of two witnesses to an overt act. Sentence was for imprisonment of forty-five years. A similar conviction of relatives of the German saboteurs was set aside for a new trial, for errors in the admission of statements taken from the accused before arraignment, in *United States v. Haupt*, 136 F. (2d) 661 (C.C.A.7th); and another prosecution against one *Leiner*, in the Southern District of New York, failed for lack of proof of an overt act. Important convictions under other provisions of law have included those of *Viereck*, reversed in 318 U.S. 236, for errors in the trial, but thereafter again entered on retrial, *Molzahn*, affirmed 135 F. (2d) 92 (C.C.A.2d), *cer. den.* 319 U.S. 774, and *Von Clemm*, affirmed 136 F. (2d) 968 (C.C.A.2d). Members of the German Bund have also been convicted, their case now being on appeal; and petitions for the revocation of their citizenship have been sustained as to some. *United States v. Kuhn*, 49 *F.Supp.* 407 (S.D.N.Y.).

Cases involving the Selective Service Act have been numerous. In *Bartchy v. United States*, 319 U.S. 484, the Court reversed a conviction of a registrant for failure to keep his draft board notified of his address, while in *Bowles v. United States*, 319 U.S. 33, it affirmed the conviction of a conscientious objector on the ground that the facts had been determined adversely to him by the Director of Selective Service on final appeal to the President. In *Falbo v. United States*, 64 S.Ct. 346,

the Court finally settled an important question as to which the lower courts had been at odds by ruling that a registrant's failure to report as notified was in itself a crime, even though the draft board had committed error in his classification, and that the latter fact could not be shown in defense to a criminal prosecution. This means in practice that the only remedy a draftee has in the courts is by application for the writ of habeas corpus and that his redress is limited to cases of clear error of law. In *United States ex rel. Phillips v. Downer*, 135 F. (2d) 521 (C.C.A.2d), such an error of law was found and the writ was sustained upon failure of the board to follow the rule established in *United States v. Kauten*, 133 F. (2d) 703, 708 (C.C.A.2d), that the statutory definition of those having religious scruples against war might include even an atheist whose response is "to an inward mentor, call it conscience or God, that is for many persons at the present time the equivalent of what has always been thought a religious impulse." This view, it is said, has not, however, been accepted by the military authorities. Cornell, The Conscientious Objector and the Law (1943) 13, 19. *Billings v. Truesdell*, 135 F. (2d) 505 (C.C.A.10th), decided that taking the soldier's oath was not necessary to the completion of induction. There a university professor claiming to be a conscientious objector was held subject to military law when he appeared at camp for induction, though he refused to be sworn in. This case is now before the Supreme Court. These were perhaps the most interesting of a large, and apparently increasing, number of cases involving all aspects of the draft, now engaging the attention of the Federal courts.

The question of internment of enemy aliens under an ancient Federal statute of 1798 has presented problems as to whether citizens of some of the German invaded countries shall be considered within its terms. The question has been particularly acute as to citizens of Austria. In *United States ex rel. Schwarzkopf v. Uhl*, 137 F. (2d) 898 (C.C.A.2d), it was held that a Jewish citizen of Austria, residing in this country, did not become a citizen of Germany by the Anschluss of 1938, in the absence of a showing of his consent to accept the invader's sovereignty. Involved in *United States ex rel. D'Esquiva v. Uhl*, 137 F. (2d) 903 (C.C.A.2d), was the meaning of the word "native"; it was there held that a native-born Austrian residing in this country in 1938 was to be considered a native of the place where he was born, and that if that place, by events recognized as legally effective by our State Department (to which inquiry should be directed), had become a part of an enemy country he would come within the statutory definition. See 37 *Am. J. Int. L.* 634; 57 *Harv. L. Rev.* 251.

Of the war agencies, the National War Labor Board (q.v.) has functioned by presidential order and later by statutory recognition, with practically no resort to the courts. It is a striking feature of the extensive quasi-judicial activities of this board, shown in many formal opinions now being published in permanent form, that it has been able to secure such complete immunization from judicial authority. In addition to the learned articles noted in last year's review, reference may be made to recent full accounts in Shields, *The Authority of the War Labor Board*, [1943] *Wis. L. Rev.* 378; Manoff, *The National War Labor Board and the Maintenance-of-Membership Clause*, 57 *Harv. L. Rev.* 183-219; Daykin, *Treatment of Unionism by the National War Labor Board*, 23 *Iowa L. Rev.*

457-483; and see also 11 Geo. Wash. L. Rev. 366; 11 Kan. City L. Rev. 203; 28 Iowa L. Rev. 671; and compare Gay, *Freezing of Labor in Wartime*, 18 Wash. L. Rev. 137. The powers of the Emergency Court of Appeals, set up to consider cases involving matters of price regulation, have been sustained, and attempts to litigate issues committed to it in other tribunals refused. *Lockerty v. Phillips*, 319 U.S. 182; compare *United States v. Johnson*, 319 U.S. 302; *United States v. Hark*, 64 S.Ct. 359; 43 Col. L. Rev. 921, 926; 41 Mich. L. Rev. 1197. See also Oppenheimer, *The War Price and Rationing Boards*, 43 Col. L. Rev. 147; 56 Harv. L. Rev. 1333. Construction was given to the Soldiers' and Sailors' Civil Relief Act of 1940 in *Boone v. Lightner*, 319 U.S. 561, where the Court upheld a trial court in refusing the statutory stay to a defendant in military service found to be deliberately attempting to evade trial where his military service was not such as to prevent his full defense of the action.

There have been interesting discussions academically of the manner and form in which punishment of war criminals might take place after the war. Thus, Professor Glueck of Harvard examines the issues at length in his article, *By What Tribunal Shall War Offenders Be Tried?* 56 Harv. L. Rev. 1059; while Professor Radin of California has gone so far as to project a picture of the trial of Hitler and other German leaders, in his striking book, *The Day of Reckoning* (1943).

Decisions Concerning Personal Liberties. This has been a year of extraordinary activity in the Supreme Court in the domain of personal liberties; and extensive divisions in the Court, which have been constant throughout the term, seem perhaps most acute in this group of cases, dissent being unusually sharp and vigorous. On two issues the Court deliberately staged a right-about, over the protests of some of its members. Last year's review called attention to the much discussed and often criticized case of *Jones v. Opelika*, 318 U.S. 584, where a majority sustained city ordinances making use of taxing and licensing powers to control and limit the distribution of religious pamphlets, notably by the sect of Jehovah's Witnesses, and where the dissenting minority took occasion to announce a change of view as to their position in the famous flag salute case of *Gobitis*, 310 U.S. 586, thus foreshadowing the overturn of that case. A further change in the personnel of the Court had the not unexpected consequence of making those the majority views of the Court. Upon rehearing, *Jones v. Opelika* was reviewed and reversed, 319 U.S. 103; and in a series of cases involving various cities, 319 U.S. 103-182, the Chief Justice and Justices Douglas, Black, and Murphy in separate opinions and with the approval of Justice Rutledge held these ordinances invalid as violating the constitutional guarantees of freedom of speech and religion, while Justices Reed, Frankfurter, and Jackson, with whom Justice Roberts concurred, argued at length for the reasonableness of the ordinances under the circumstances involved. (There were certain minor variations in views not important, and the Court was unanimous in thinking an injunction an inappropriate or unnecessary remedy, in view of the reversals of convictions of ordinance violations.) Reversal of the flag salute decision came in *West Virginia State Board of Education v. Barnette*, 319 U.S. 624, with Justices Roberts and Reed adhering to their former opinion that requiring school children to salute the flag violated no constitutional provisions, while Justice Frankfurter, the author of the earlier opinion,

dissenting at some length, vigorously asserted the right of the legislative body to determine issues of this character. The latter plea has recently been echoed by a distinguished historian, Professor Commager, in his just published book dedicated to Justice Frankfurter, *Majority Rule and Minority Rights* (1943). In view of the critical comments on the earlier holdings, however, it seems probable that these new holdings will receive general law review support; see 43 Col. L. Rev. 928-938, 42 Mich. L. Rev. 163, 186, 319, 12 Geo. Wash. L. Rev. 70, 92 U. of Pa. L. Rev. 103.

A final case of historic proportions was that of *Schneiderman v. United States*, 320 U.S. 118 (argued for the petitioner by Mr. Wendell Willkie, the Republican presidential candidate of 1940), where the Court reversed a cancellation of a certificate of citizenship of the petitioner, which had been granted by the lower courts, on the ground of his fraud in concealing membership in the Communist Party; the opinion by Mr. Justice Murphy, with concurring opinions by Justices Douglas and Rutledge and dissenting opinion by the Chief Justice, speaking also for Justices Roberts and Frankfurter, goes extensively into the activities of the Communist Party in this country. Extensive comment may be found in 3 Lawyers Guild Rev. 42; 42 Mich. L. Rev. 184; 28 Wash. U. L. Q. 275; 51 Yale L. J. 1215; 43 Col. L. Rev. 918, 936, 946; 12 Fordham L. Rev. 209-251.

Questions of freedom of speech have been litigated in connection with various agency rulings, involving the Labor Board, the Federal Communications Commission, and the enforcement of the Anti-Trust Act, which are noted hereinafter. The Court, however, has followed earlier precedents to reverse the highest court of the State of New York to hold that permanent injunction against labor picketing violated the constitutional freedom. *Cafeteria Employees Union, Local 302, v. Angelos*, 64 S.Ct. 126.

In past terms the Court has shown much patience in considering appeals of persons confined in Federal and other penitentiaries, addressed to it rather informally, which it has treated as applications for writs of habeas corpus. These have increased in great numbers and the Court recently disposed of a substantial number by dismissing them without prejudice to application to other courts, pointing out that it did not "save in exceptional circumstances" exercise its discretionary jurisdiction to issue such writs where an adequate remedy may be had in other courts. *Ex parte Abernathy*, 64 S.Ct. 13.

Decisions Concerning the Federal System. The Supreme Court has continued its attitude of recent years in upholding at once a broad Federal power over interstate commerce and other related Federal fields, with nevertheless much freedom reserved to the States to act in the absence of congressional action. Thus, it has sustained the California Agricultural Prorate Act and raisin-marketing program even against a claim of its violation of the Anti-Trust Act, *Parker v. Brown*, 317 U.S. 341, and has allowed Illinois to require cabooses on freight trains, *Terminal Railroad Association of St. Louis v. Brotherhood of Railroad Trainmen*, 318 U.S. 1. See 43 Col. L. Rev. 876-887. It has upheld a Pennsylvania requirement of minimum milk prices even on sales to the United States, *Penn Dairies, Inc. v. Milk Control Commission of Pennsylvania*, 318 U.S. 261, although it did not sustain similar provisions of a California Act as to milk actually sold within government territory at Moffett Field, California, *Pacific Coast*

Dairy v. Department of Agriculture of California, 318 U.S. 285, the Court dividing along somewhat different lines in the two cases. 43 Col. L. Rev. 895-903; 11 Geo. Wash. L. Rev. 381; 41 Mich. L. Rev. 993; 27 Minn. L. Rev. 577; 91 U. of Pa. L. Rev. 761. It also enjoined Florida officials from enforcing the provision of the Florida Commercial Fertilizer Law against the United States, actually engaged in carrying out its soil-building program, *Mayo v. United States*, 319 U.S. 441; and it upheld a Federal act excepting preferred stock of national banks owned by the Reconstruction Finance Corporation from State taxation. *Maricopa County v. Valley National Bank of Phoenix*, 318 U.S. 357; 12 Geo. Wash. L. Rev. 100. It upheld the priority of Federal tax liens in *Detroit Bank v. United States*, 317 U.S. 329, and *Michigan v. United States*, 317 U.S. 338; but it sustained State control over the accounting of fiduciaries of estates later in bankruptcy, *Emil v. Hanley*, 318 U.S. 515. Its willingness, often shown of late, to sustain State taxation extensively in interstate commerce (see Lockhart, *Gross Receipts Taxes on Interstate Transportation and Communication*, 57 Harv. L. Rev. 40) induced a lower Federal court to uphold a State franchise tax on that part of an interstate trucking business which originated in the State. *Spector Motor Service, Inc. v. Walsh*, C.C.A. 2d, Dec. 24, 1943. In *Standard Dredging Corp. v. Murphy*, 319 U.S. 306, the Supreme Court also upheld a New York pay-roll tax upon employers of certain maritime employees.

Not only in adjusting the rights of the States with the national government is the Supreme Court called upon to exercise its umpiring functions; it must also do so with respect to conflicts between States. The notable case decided at the Court's last session of 1942, *Williams v. North Carolina*, 317 U.S. 287, reversing the famous *Haddock* case of 1906, 201 U.S. 562, to hold that a State must accord full faith and credit to a Nevada divorce in the absence of a showing of fraudulent domicile imposed upon the Nevada court, has called forth more law review comment and more extensive learned articles than any other case in the last several terms of the Court. Space is lacking to attempt citation of these learned discussions; among the more notable, reference may be made to Professor Lorenzen's *Haddock v. Haddock Overruled*, 52 Yale L. J. 341, Professor Bingham's *Song of Sixpence; Some Comments on Williams v. North Carolina*, 29 Corn. L. Q. 1, Professor Cook's *Is Haddock v. Haddock Overruled?* 18 Ind. L. J. 165, and Professors Strahom and Reiblich's *The Haddock Case Overruled—the Future of Interstate Divorce*, 7 Md. L. Rev. 29, and several pages of comment from the lay press quoted in 29 A.B.A.J. 78. The decision has compelled several States to change their practice extensively to a recognition of foreign divorce decrees. This is especially true in New York, where the cases construing the *Williams* case have already been numerous; a striking instance is the decision on November 24 of the Court of Appeals in the case of *In re Estate of Anna Holmes*, 110 N.Y.L.J. 1857, holding by a divided vote that recognition must be given a Nevada divorce by the grant of letters of administration to the husband on the estate of a woman he had thereafter married, even though the wife had established the invalidity of the divorce as to herself by an action in New York. The situation in Illinois is discussed in *Stephens v. Stephens*, 319 Ill. App. 292, 49 N.E. (2d) 560, and 10 U. of Chi. L. Rev. 499. It seems probable that local courts will attempt to stop resort to the foreign divorce

court by granting injunctions in advance; thus the daily press reports the case of *Cromwell v. Cromwell*, where a former ambassador has obtained an injunction from a New Jersey court, directing his famous wife not to proceed with her Nevada divorce action, on the ground that she is actually a resident of New Jersey, not Nevada, a direction which she and the Nevada court appear to have rejected as invalid. Undoubtedly the outcome of this already famous litigation will add new chapters to our never-dull divorce law. The theory of *res judicata* of the *Williams* case has now been carried over to another field of law where the Supreme Court, against sharp dissent, has ruled, in the *Magnolia Petroleum* case, 64 S.Ct. 208, that an award of workmen's compensation in Texas precludes a later award in Louisiana, even though the Louisiana Act calls for greater compensation and the Louisiana court had accepted the Texas award as a partial fulfillment of the obligation.

Supervision of Federal Agencies. During the year the Court has re-emphasized the limited nature of court review of the quasi-judicial adjudications of the various governmental agencies. In the past it has often pointed out that in general the agencies have the primary duty and responsibility of making adjudications on the facts and applying the law; and the courts may intervene only for decisions without adequate basis in the facts or clearly erroneous in law. Lately the Court took special pains to reiterate that, contrary to the different practice which had developed with respect to Federal taxes, the decisions of the Tax Court of the United States, formerly the Board of Tax Appeals, were entitled to the same respect as other agencies; and it stated a definite intent to apply a like rule to this agency. *Dobson v. Commissioner of Internal Revenue*, 64 S.Ct. 239; *Dixie Pine Products Co. v. Commissioner of Internal Revenue*, 64 S.Ct. 364. With respect to decisions of the National Labor Relations Board, it upheld the Board in requiring quite complete disestablishment of an employees' association which had been employer dominated, contrary to the view of the intermediate court, *N.L.R.B. v. Southern Bell Teleph. & Telegr. Co.*, 319 U.S. 50; and it also supported the Board in ordering an employer to refund dues checked off for a company-dominated union, *Virginia Electric & Power Co. v. N.L.R.B.*, 319 U.S. 533. It refused review of a ruling that State unemployment benefits did not constitute earnings to excuse refund by an employer, on the ground that objection had not been made to the Board itself. *Marshall Field & Co. v. N.L.R.B.*, 318 U.S. 253; 43 Col. L. Rev. 926; 56 Harv. L. Rev. 1330. In *N.L.R.B. v. Indiana & Michigan Electric Co.*, 318 U.S. 9, it held that misconduct and violence on the part of union officials would bar relief (three justices sharply dissenting on the facts); and in *In re Bradley*, 318 U.S. 50, it later held that sentence for contempt could be either only a fine or imprisonment, not both. One of its most interesting holdings came by way of refusing interference with a lower court ruling; in *N.L.R.B. v. American Tube Bending Co.*, 134 F. (2d) 993, the Second Circuit Court of Appeals had reversed a Board order finding coercion in an employer's speech to his employees, fairly stating their freedom of choice, although arguing against approval of the Union. The Supreme Court denied certiorari, 64 S.Ct. 84, thus allowing the disapproval of the Board order to stand. Since the speech in question is set forth in the report of the lower court, it has been taken as a model of what is permissible comment by an employer.

With reference to the Securities and Exchange Commission, the Court in the *Chenery Corporation* case, 318 U.S. 80, expressed support of rather wide powers in the Commission to disapprove of a plan for reorganization of a public utility holding company because of improper actions of officers and stockholders in protecting themselves, but nevertheless, against sharp dissent, returned the case to the Commission for more complete findings and rule covering the matter. See 43 Col. L. Rev. 253; 56 Harv. L. Rev. 1002; 41 Mich. L. Rev. 987; 17 St. John's L. Rev. 129. In *S.E.C. v. C. M. Joiner Leasing Corp.*, 64 S.Ct. 120, it held the Commission entitled to an injunction against violations of the law by dealers in a campaign to sell assignments of oil leases. In *Charles Hughes & Co. v. S.E.C.*, C.C.A.2d, Dec. 10, 1943, the lower court sustained the Commission's revocation of a broker's license for a policy of extensive mark-ups of stocks over market prices, and in the several *Okin* cases, 132 F. (2d) 784, 137 F. (2d) 398, 862, 139 F. (2d)—(C.C.A.2d, Nov. 29, 1943), sustained actions by the Commission restraining or holding in contempt or otherwise limiting a sole stockholder of a corporation in a campaign for proxies based upon misleading statements. In *Smolowe v. Delendo Corp.*, 136 F. (2d) 231 (C.C.A.2d), where the Supreme Court refused review, 64 S.Ct. 56, the same court sustained a claim of the Commission under the statute to recover for a corporation insiders' profits made by officers even without a showing of intent to defraud.

In *National Broadcasting Co. v. United States*, 319 U.S. 190, the Court sustained orders of the Federal Communications Commission designed to break up monopoly in radio broadcasting, even against the claim of control of freedom of speech, whereas in *Federal Communications Commission v. National Broadcasting Co.*, 319 U.S. 239, the Court allowed the holder of a radio broadcasting license to intervene in a proceeding concerning the license of another holder which might affect the first holder's broadcast channel. See Barber, *Competition, Free Speech and FCC Radio Network Regulations*, 12 Geo. Wash. L. Rev. 34; 41 Mich. L. Rev. 1195; 42 Mich. L. Rev. 329; 52 Yale L. J. 671.

The jurisdiction of the Federal Power Commission against State regulation was sustained rather broadly in *Jersey Central Power & Light Co. v. Federal Power Commission*, 319 U.S. 61; and see *Niagara Falls Power Co. v. Federal Power Commission*, 137 F. (2d) 787 (C.C.A.2d), cer. den. 64 S.Ct. 206. The Court continued generally its favorable construction of the Fair Labor Standards Act, *Overstreet v. North Shore Corp.*, 318 U.S. 125; *Walton v. Southern Package Corp.*, 64 S.Ct. 320, holding it inapplicable, however, to local wholesalers, *Walling v. Jacksonville Paper Co.*, 317 U.S. 564; *Higgins v. Carr Bros. Co.*, 317 U.S. 572, or to a contractor's cook furnishing meals to railroad employees, *McLeod v. Threlkeld*, 319 U.S. 491. See 43 Col. L. Rev. 259, 851-854; 31 Geo. L. J. 462; 41 Mich. L. Rev. 1060; 31 Calif. L. Rev. 415. In *Southland Gasoline Co. v. Bayley*, 319 U.S. 44, it construed and applied the exemption of employees of interstate motor carriers who are within the jurisdiction of the Interstate Commerce Commission as to qualifications and maximum hours of service.

One of the sharpest divisions yet encountered in the Court has occurred, however, with respect to the powers of the Federal Power Commission over rate-making. The issue goes back to a dispute which had its genesis more than fifty years ago as

the Court came to develop its famous and much criticized rule of "fair value" as a basis of rate-making. In *Public Utilities Commission of Ohio v. United Fuel Gas Co.*, 317 U.S. 456, involving consideration of a State rate case, the Court had split as to the proper approach to natural gas regulation. In *Federal Power Commission v. Hope Natural Gas Co.*, 64 S.Ct. 281, the Court sustained the Commission's use under the Natural Gas Act of 1938 of a rate base determined on the prudent-investment theory of valuation against the most vigorous dissent that natural gas rate-making required a different approach in view of its economic and social aspects.

The Court has recently passed on acts of the National Mediation Board under the Railway Labor Act and held against dissent that certifications of union organizations made by the Board were not subject to review by the courts, *Switchmen's Union of North America v. National Mediation Board*, 64 S.Ct. 95, and so, also, as to provisions of a railway bargaining agreement, *General Committee, etc. v. Southern Pac. Co.*, 64 S.Ct. 142, and jurisdictional controversies generally between railroad unions, *General Committee, etc. v. Missouri-Kansas-Texas R. Co.*, 64 S.Ct. 146. The Court, in cases dealing with the reorganization of the *Western Pacific*, 318 U.S. 448, and the *Milwaukee Railroads*, 318 U.S. 523, has shown itself ready to sustain extensive powers of the Interstate Commerce Commission in the reorganization of railroads, while nevertheless insisting upon the protection of the earlier security investors, even against the ordinary stockholders. This matter is extensively discussed in two articles by R. T. Swaine, *A Decade of Railroad Reorganization under Section 77 of the Federal Bankruptcy Act*, 56 Harv. L. Rev. 1037, 1193.

The Supreme Court is also called upon to supervise the activities of Federal law enforcement agencies in ordinary process of court review. In connection with the Sherman Act the upholding of the conviction of the *American Medical Association* at the beginning of the year, 317 U.S. 519, has been the subject of extensive comment, 53 Yale L. J. 162, 41 Mich. L. Rev. 1003, 29 Va. L. Rev. 832. A decision a year later seems destined to arouse as much interest, for the Court has held that an exclusive patent license may violate the anti-trust laws and that the formerly well settled patent doctrine of contributory infringement (that one who sells an unpatented part of a combination patent for use in the assembled machine may nevertheless be guilty of infringement) can no longer prevail against the defense that a combination patent is being used to protect an unpatented part from competition. These cases, which involved also questions of res judicata as the points had been previously litigated, called forth sharp dissent, but certainly went far to establish the supremacy of the anti-trust over the patent laws. *Mercoid Corp. v. Mid-Continent Investment Co.*, and *Mercoid Corp. v. Minneapolis-Honeywell Regulator Co.*, 64 S.Ct. 268, 278. Another decision likely to disturb a patent-minded bar is *Marconi Wireless Telegraph Co. v. United States*, 320 U.S. 1, where a sharply divided court held one of the basic Marconi patents dealing with developments in wireless telegraphy—previously upheld in various courts—to have been anticipated by earlier patents to other inventors.

The Court sustained the immunity provision under the Sherman Anti-Trust Act, holding that one who gave testimony under subpoena before a grand jury could not be prosecuted for that offense even though he had not claimed his privilege

United States v. Monia, 317 U.S. 424; 41 Mich. L. Rev. 1199; 18 Notre Dame Lawyer 348. In the important case of *United States v. Associated Press*, 52 F.Supp. 362 (S.D.N.Y.), a three-judge district court held by a two-to-one vote that the Associated Press violated the Sherman Act by its rules of limited membership, making choice practically dependent upon competitors of the applicant in the vicinity. The judges held that constitutional freedom of speech was not involved. (See *NEWSPAPERS*.)

During the year the Supreme Court sustained and gave new life to the ancient "informer" statute which allowed treble recovery to a person who successfully sued those making fraudulent claims against the United States. Thus it placed part of the anti-trust law enforcement in private hands, *United States ex rel. Marcus v. Hess*, 317 U.S. 537; *United States ex rel. Ostrager v. New Orleans Chapter, Associated General Contractors*, 317 U.S. 562, although by an equally divided court it failed to upset a decision below, *United States ex rel. Brensilber v. Bausch & Lomb Optical Co.*, 131 F. (2d) 545 (C.C.A.2d), construing the statute narrowly as to the nature of the fraudulent claim to be recognized, 64 S.Ct. 187. See 41 Mich. L. Rev. 1001; 11 Geo. Wash. L. Rev. 531.

The Court also upheld the right of an author to sell his privilege of assignment, even though death might prevent him from ever exercising it. *Fred Fisher Music Co. v. M. Witmark & Sons*, 318 U.S. 643. See Brown, *Renewal Rights in Copyright*, 28 Corn. L. Q. 460; 18 Ind. L. J. 318; 42 Mich. L. Rev. 190; 16 So. Calif. L. Rev. 353; 17 Temp. L. Q. 299. Being called on to consider the taking of private property in eminent domain proceedings, it established general principles, including the right of the United States to recover back amounts overpaid, in *United States v. Miller*, 317 U.S. 369; 11 Geo. Wash. L. Rev. 385; 27 Minn. L. Rev. 534; 91 U. of Pa. L. Rev. 671; 28 Wash. U. L. Q. 178; but in *United States ex rel. T.V.A. v. Powelson*, 319 U.S. 266, in a five-to-four decision, it refused to allow value based upon a power project dependent upon the exercise of the State power of eminent domain. 29 Corn. L. Q. 236.

The Court has been careful to uphold rights of accused in Federal criminal cases, and during the year has established a vitally important principle that statements obtained from an accused even though of a voluntary nature are inadmissible in evidence if at the time the accused was being held in violation of statutes requiring a prompt arraignment before committing officials. *McNabb v. United States*, 318 U.S. 332; *Anderson v. United States*, 318 U.S. 350. See 56 Harv. L. Rev. 1008; 27 Marq. L. Rev. 212; 21 Chi.-Kent L. Rev. 340. This has caused the reversal of numerous cases by the intermediate appellate courts and has been the subject of much comment and proposed legislation, now being discussed in Congress, suggesting some modification of what is thought by many to be an undue strictness of the now announced law.

Other interesting cases involving the administration of the criminal law include *United States v. Johnson*, 319 U.S. 503, reversing a decision below invalidating an indictment by a grand jury continued into another term of court, on the ground that the jury, while it could not initiate new investigations, could, however, complete those which it had begun, 41 Mich. L. Rev. 966, 37 Ill. L. Rev. 453, 18 Notre Dame Lawyer 392; *Johnson v. United States*, 318 U.S. 189, criticizing (but holding the objection waived) the trial court's action

in commenting upon the accused's claim of privilege against self-incrimination after he had taken the stand to testify as to certain matters before asserting his claim; and *Roberts v. United States*, 64 S.Ct. 113, holding against dissent that when probation after sentence has been revoked an increased sentence cannot then be invoked. In *Tot v. United States*, 319 U.S. 463, the Court refused to sustain the statutory presumption under the Federal Firearms Act that possession of a fire-arm or ammunition was "presumptive evidence" of a violation of law, on the ground that it was violent and inconsistent with any arguments drawn from experience, a view of "presumptions" which has drawn the criticisms of Dean Morgan of Harvard, 56 Harv. L. Rev. 1324, and Dean Hale of Southern California, 17 So. Calif. L. Rev. 48. The Court held the Federal Kickback Act, penalizing the requiring of public works' employees to "give up" portions of wages, applicable to a foreman of a subcontractor on a public construction project. *United States v. Laudani*, 64 S.Ct. 215. It also upheld an indictment framed against imprisonment for debt based on the post-Civil War which prohibited the return of any person to a condition of peonage. *United States v. Gaskin*, 64 S.Ct. 318. Compare also Folsom, *A Slave Trade Law in a Contemporary Setting*, 29 Corn. L. Q. 203. It refused to hold the Federal Bank Robbery Act which covers in terms "any felony" committed in a national bank to include State felonies. *Jerome v. United States*, 318 U.S. 101; 43 Col. L. Rev. 257, 861; 12 Fordham L. Rev. 66; 42 Mich. L. Rev. 191; 17 St. John's L. Rev. 131. And it refused to find violative of due process the New York trial of Louis Lepke Buchalter and others, 319 U.S. 427.

Decisions mainly concerning civil procedure have brought out the insistence of the Court, and particularly of a vigorous minority, on the full accord to litigants of the right of trial by jury; in cases such as those involving claims of war risk insurance or asserted negligent injuries of seamen and railroad employees, there has been a sharp division in the Court even as to the meaning and extent of the Court's power to direct a verdict. Thus, in *De Zon v. American President Lines*, 318 U.S. 660, *Galloway v. United States*, 319 U.S. 372, and *Brady v. Southern Ry. Co.*, 64 S.Ct. 232, a majority sustained the action of the trial court in taking the case from the jury; in *Bailey v. Central Vermont Ry.*, 319 U.S. 350, and *Owens v. Union Pac. R. Co.*, 319 U.S. 715, a majority went the other way; and in *Tiller v. Atlantic Coast Line R. Co.*, 318 U.S. 54, the Court was in agreement in reversing a directed verdict below. See 31 Calif. L. Rev. 454; 92 U. of Pa. L. Rev. 92. The Court also extended the use of mandamus as an auxiliary remedy in the appellate courts, providing in effect in particular cases for a peremptory appeal, as in cases involving the United States or a friendly foreign government on a matter which might be delayed in the courts many years. *Ex parte Republic of Peru*, 318 U.S. 578; *Ex parte United States*, 319 U.S. 730; 43 Col. L. Rev. 843, 916. The generally limited nature of the remedy is stated in *Roche v. Evaporated Milk Association*, 319 U.S. 21; 41 Mich. L. Rev. 1205. The Court has also established important principles with respect to actions removed from State courts to the Federal court by defendants under the removal power in matters involving Federal questions or where the parties are citizens of different States; the Court in effect holds the removed action to be a Federal cause and allows the pleading of a

counterclaim of matters cognizable only in the State courts. *Freeman v. Bee Machine Co.*, 319 U.S. 448. It has further clarified the law of declaratory judgments, holding that this new remedy cannot be used broadly to draw control over State tax laws into the Federal court. *Great Lakes Dredge & Dock Co. v. Huffman*, 319 U.S. 293. A majority of the Court held that such a judgment could not be refused as to a matter of State law, even though doubtful and disputed, where the Federal court had jurisdiction because of the diversity of citizenship of the parties, *Meredith v. City of Winter Haven*, 64 S.Ct. 7, while a somewhat different grouping of the Court held in *Burford v. Sun Oil Co.*, 319 U.S. 315, that resort to that ground of Federal jurisdiction should not be allowed to destroy a State unified method for formation of policy regarding the oil industry. 56 Harv. L. Rev. 1162; 42 Mich. L. Rev. 337.

Reform of Legal Procedure. The outstanding event of the year in reform of legal procedure has been the announcement by the advisory committee appointed by the Supreme Court of its draft of uniform rules of criminal procedure for the Federal courts. Federal Rules of Criminal Procedure—Preliminary Draft (1943). These rules represent a notable attempt at clarity, simplicity, and uniformity, as in the rules of civil procedure effective in 1938, and have been acclaimed with practically unanimous support of their guiding principles, with disagreement limited only to details. Rather curiously the one point which seems to have aroused the most discussion was a provision of the rules adopting the substance of the *McNabb* decision referred to above; and after consideration, the committee, in making its report to the Court in November, decided to eliminate this rule, seemingly to allow the law to develop by court decision or by legislation and also because this issue involved a rule of evidence which was not extensively restated in the committee's draft of rules. Among important advantages of the new rules are the combination of all the old-fashioned forms of objection by a defendant—motion to quash, plea in abatement, demurrer, and the like—into one simple uniform motion by which all preliminary issues may be raised; the simple forms of indictment and of stating the charge upon which prosecution is being had; the granting of the right to waive grand jury indictment, with trial then on information only; simpler provisions for appeal in line with the civil rules; and in general provisions for an uncomplicated direct form of administration of the criminal law along lines already achieved in the civil rules. See Orfield, *The Preliminary Draft of the Federal Rules of Criminal Procedure*, 22 Tex. L. Rev. 37; Robinson, *The Proposed Federal Rules of Criminal Procedure*, 27 J. Am. Jud. Soc. 38; Waite, *ibid.*, 27 J. Am. Jud. Soc. 101; and 29 A.B.A.J. 376, 390, 603, 654. The committee after publishing its draft and receiving comments from the bench and bar again presented its draft to the Court, but the Court has suggested that it take time to receive further comments during the coming year in order that it prove fully acceptable for adoption thereafter.

The Court's advisory committee on the Federal Rules of Civil Procedure has been active during the year to consider amendments to the highly successful practice in the civil courts. As yet no public report has been made. In this connection it is to be noted that the progress of procedural reform in the States, although vigorously supported by the important Special Committee on Improving the Administration of Justice of the American

Bar Association under the leadership of Federal Judge John J. Parker, has somewhat slowed down so far at least as concerns actual accomplishments of definite reforms. It is true that in addition to the reforms noted in last year's review new codes appear to have been adopted in Iowa, Missouri, and North Dakota, 27 J. Am. Jud. Soc. 19, but these reforms have been of a considerably restricted nature as compared to the Federal rules. Notably, too, the rather complete adoption of the Federal system made by the Nebraska Supreme Court under its rule-making power was repealed by the legislature—a step which must be counted a setback, not merely because the Nebraska rules were well drawn, but because they re-enforced the idea of court rule-making. The need of reform was notably stated by Chief Justice Simmons to the Nebraska legislature in an address, *Why New Rules of Civil Procedure Now?* 26 J. Am. Jud. Soc. 170, and the whole field exhaustively surveyed by former Dean Pound of Harvard in *Improving the Administration of Justice*, 29 A.B.A.J. 494.

In a more limited way, the courts appear to be accepting their responsibilities to improve details of their procedure as they can by their local rules. Thus, the Federal appellate courts have gone far to avoid heavy printing costs upon litigants by eliminating the requirement of a formal printed record, and allowing the parties to print, as appendices to their respective briefs, only such parts of the proceedings below as they definitely plan to rely upon in their appeals. See 26 J. Am. Jud. Soc. 148, 179; 27 J. Am. Jud. Soc. 55. The adoption of this rule in November by the busy appellate court for the Second Circuit, sitting in New York City, makes it applicable in nearly one-half the circuits and in probably more than one-half the total Federal appeals.

The method by which judges should be selected has once more come under critical public consideration in connection with events occurring at the regular popular election in New York last November. Just before election day the District Attorney in New York County revealed evidence in his possession showing a rather intimate connection between one of the candidates and a person adjudged of ill repute because of his criminal associations; and it appeared that the candidate had expressed thanks to this person for his nomination to judicial office. Thereupon the two major parties, which had both nominated this candidate along with others in a bipartisan choice of those presumably best fitted for the bench, tried to withdraw the nomination. The courts, however, ruled that such action was too late, and also decided that grounds were lacking upon which the candidate might be disbarred from practice of the law and thus rendered ineligible for a judicial position. Although an extensive campaign in the press and elsewhere was waged for his defeat, nevertheless the party nominations were sufficiently strong to insure the candidate's election, though by a comparatively small vote. Whether the agitation which took place will lead to a change in the much debated system of election of judges remains to be seen. A judicious statement of the entire affair appears in the article, *New York Experience Shows Need for Better Methods of Choosing Judges*, 29 A.B.A.J. 690.

Legal Education. The difficult period which the war ushered in for the law schools, so brilliant a feature of American education previously, was a topic of discussion in last year's review. Conditions have remained serious, indeed, perhaps only

slightly ameliorated in places by the action of the Army or Navy in taking over the physical quarters in which a school has been housed for use in military or naval training. No further figures of law school enrollment have been available; but it is understood that the enrollment is still further reduced, presumably to less than a quarter of its prewar level. Schools in general are continuing under reduced faculties, with many professors away in the Army or Navy or engaged in other war activities. Meanwhile the demand in both governmental and private legal circles for lawyers continues to be most heavy. It must be considered one of the maladjustments of war that legal training is made of no use in the military establishment—lawyer-soldiers being said to be “a dime a dozen”—just when the demand for expert legal service is increasing because of a combination of new problems and decreased personnel.

Nevertheless, and in spite of the difficulties, it is interesting to note the amount of vigor which legal education has had and which is still apparent in the discussions in the law reviews, greatly abbreviated as those must be because of printing difficulties and the great dearth of student editors. Thus, a notable article, Lasswell and McDougal, *Legal Education and Public Policy: Professional Training in the Public Interest*, 52 Yale L. J. 203, advocated in vigorous and extended detail a more definite emphasis by the schools upon leadership training, rather than upon vocational skills. This, in turn, provoked discussion, as by Professor Llewellyn in the May Columbia Law Review, an issue devoted almost wholly to discussions of methods of legal education by law and sociology teachers and students, Messrs. Weihofen, Cavers, Johnson, Moorhead, Halpern, and Llewellyn, 43 Col. L. Rev. 423-485. At the same time, under the leadership of Dr. Hubert W. Smith of Harvard, symposia on the relation of law and medicine, including practical discussions of scientific proof of medical knowledge in law, have appeared in several law reviews, including those of Boston, Chicago, Iowa, Michigan, North Carolina, Southern California, Tennessee, Virginia, and Yale.

Meanwhile a very interesting controversy has developed in English legal history involving one of the most famous of books on English law, Bracton's *De Legibus et Consuetudinibus Angliae*, of the thirteenth century. In 1941 there were published lectures of the late Professor Kantorowicz entitled *Bractonian Problems*, wherein he criticized Professor Woodbine's monumental edition of Bracton, published by the Yale Press, and argued that the author of the famous book

presage a resurgence of interest in this particular subject, as well as in legal history.

Perhaps as surprising as any recent development in law as a science is the report by Professors Underhill Moore and Charles C. Callahan of their long-continued studies of the effect of parking habits in a city, *Law and Learning Theory: A Study in Legal Control*, 53 Yale L. J. 1-136. The authors have achieved the unusual result, a veritable tour de force, of making city automobile parking so scientific as to be understandable except to the esoteric initiated.

Note was taken in last year's review of the extensive system developed by the Board of Legal Examiners operating under the U.S. Civil Service Commission (q.v.) to establish a roster of lawyers eligible for the Federal service. This unique and interesting experiment in the selection of government lawyers has achieved a great measure of success, notwithstanding the difficulties of recruiting personnel in these times. The development of an examination along the lines of a highly organized specialized intelligence test for lawyers, followed by the personal interviews by distinguished local boards, established new methods of selection which are likely to prove a model. The various steps in the process have been learnedly discussed by several members of the Board in the Bar Examiner for July, 1943, 12 Bar Examiner 35-48, containing articles by Solicitor General Fahy, Board Member Wickser, Board Secretary Fuchs, and Professor Weihofen, Principal Attorney of the Legal Examining Section. Professor Weihofen, who was instrumental in organizing the examination itself, has a discussion of the statistical studies made concerning it, in *The Civil Service Program for Government Lawyers*, 3 Lawyers Guild Rev. 1.

For court decisions, see also the subject. For law violation and enforcement, see FEDERAL BUREAU OF INVESTIGATION; JUVENILE DELINQUENCY; PRISONS, PAROLE, AND CRIME CONTROL. See, also STATE LEGISLATION under *State Government and Employees*; INDIA under *History*.

CHARLES E. CLARK.

LEAD. Lead, which in 1942 was one of the few metals for which supply exceeded demand, was less plentiful in 1943. While production dropped, demand increased, making it necessary to draw upon the stockpile which had been accumulated. Only about 40 per cent of total consumption was secured from domestic mine production, the deficit being made up from imports, secondary lead, and steadily increasing withdrawals from stockpile.

REFINED LEAD PRODUCTION AND SHIPMENTS
[American Bureau of Metal Statistics]
(In tons of 2,000 lb.)

Year	Stocks at beginning	Production		Total Production	Total Supply	Stock at end	Domestic Shipments
		Domestic Ore	Secondary & foreign				
1938	129,131	381,849	26,690	408,539	537,670	115,902	421,625
1939	115,902	462,213	35,778	497,991	613,893	58,777	555,074
1940	58,777	480,894	104,586	585,480	644,257	40,926	603,143
1941	40,926	527,503	107,385	634,888	675,814	20,185	655,542
1942	20,185	529,226	104,592	633,818	654,003	34,937	618,947
1943	34,937	492,351	54,322	546,673	581,610	33,090	548,417

had greater familiarity with Roman sources than had been conceded to Bracton, thus suggesting in effect that perhaps another than Bracton was the author. This theory, although accepted by the distinguished historian Holdsworth, was discussed most critically by Professors Woodbine, 52 Yale L. J. 428, Schulz, 59 L. Q. Rev. 172, and McIlwain, 57 Harv. L. Rev. 220; and the debate seems to

The same labor shortage which shackled copper and zinc production restricted lead mining, but contrary to frantic efforts to secure manpower to mine and smelt the two former metals, little assistance was given to lead. Lead-zinc mines whose values were composed in too large a proportion of the former were shunted from the top to the bottom of the labor priority list.

Because Australian railroads were inadequate to haul both lead and zinc concentrates from mine to tidewater for shipment as ballast to American smelters, lead had to bow to the more critical need for zinc making receipts from the South Pacific continent uncertain. Likewise, copper and zinc were given priority on bottoms from South America, where Peru was the principal lead producer. Thus imports, like domestic production, were restricted, although Canada and Mexico, which also faced production difficulties, each shipped considerable quantities to the United States.

Domestic mine production promises to decline further in 1944 because of labor shortages, the lead producers industry advisory committee to the War Production Board stated in November, 1943. Imports were expected to increase somewhat, but recovery of scrap also was believed to be on the downgrade. Further withdrawals from stockpile appear inevitable unless an unexpected drop in requirements develops.

During 1942 and 1943 shipments of refined lead to lead sheathed cable manufacturers were larger than for any other use. Ammunition was the second largest user, but proportionately smaller quantities were required for this purpose than in the first World War. In the first World War lead shrapnel shells were manufactured in large quantities, but these have been largely replaced during the current war by fragmentation shell with the result that this particular munition use has been virtually eliminated. On the other hand, lead azide has largely replaced mercuric fulminate as a detonator, although this is not a large consumer by tonnage.

As in peace time, storage batteries both for automotive equipment and for submarines have consumed large tonnages. Because of a scheduled decrease in small arms ammunition in 1944, considerably less lead will be required during the year for that purpose. Compensating increases in demand for other essential products, such as batteries, cables, tetraethyl lead, and other products for the war program are expected by the WPB.

As in 1941 when southeastern and central Missouri produced 164,388 tons of 461,426 tons of lead mined in the United States, and in 1942 when this district produced 195,916 tons of 496,239 tons mined in the country, the relative importance of producing districts was fairly stable during 1943. Although the Hecla Mine, the State's largest producer, neared the end of its career, the Coeur

d'Alene district of Idaho was second in importance in 1943. In 1941, Idaho produced 104,914 tons; in 1942, 113,909; in 1943, 96,100. Utah was third with a production of 66,250 tons in 1943, compared with 69,601 in 1941 and 71,930 in 1942. Domestic mines operated under the Premium Price Plan, by which the Federal government paid premiums as high as 5½ cents per lb. over the market price for production in excess of quotas set for each mine by a committee including WPB and OPA representatives. When the Premium Price Plan was established in 1942, a single premium of 2¾ cents per lb. was established, but early in 1943 action was taken to make it possible to pay an additional 2¾ cents per lb. premium to high-cost mines. On Oct. 27, 1943, it was announced that mines not already operating would not be eligible to receive this additional premium. No new projects for the production of lead which require government financing will be approved, although mines now producing will, of course, be kept in production. See ANTIMONY.

The ceiling price for lead remained at 6.50 cents per lb. at New York throughout the year, although domestic mines were, of course, paid the premiums described above in addition to this price.

CHARLES T. POST.

LEAGUE OF NATIONS. The League of Nations, whose normal activities had been largely checked in 1939 when the nations took the alternative method of war, gained ground noticeably during 1943 not only as a working institution but also as an ideal and philosophy of cooperation and collective security. As the world's thoughts turned more and more towards the planning of peace and reconstruction, they increasingly went back over the League's record and drew on its experience. (See POSTWAR PLANNING.)

Most striking in the immediate practical sense was the association of continuing League agencies in the newly developing United Nations agencies (q.v.). The United Nations Conference on Food and Agriculture took a first cautious step in inviting the League's Economic and Financial Section and the International Labor Organization to transmit any documentation to its Conference at Hot Springs; the Interim Commission which grew out of that Conference went further in inviting actual participation in the planning of the new permanent agency. The United Nations Relief and Rehabilitation Council at Atlantic City, however, went the full way at once, not only inviting both agencies, as well as the League's Health Section, to the opening conference but also extending that invitation automatically to the future meetings of the Council, regional committees, and technical committees, with the reciprocal authorization for its representatives to participate in meetings of the other agencies. Thus an effective working arrangement developed almost spontaneously whereby the international agencies created after the last war were enabled by daily association to add their experience and assistance to the new agencies being created in this war.

At the same time, the League's own organizations began to pick up activity. While the principal political agencies of Assembly and Council remained unconvened for the third war year, various other agencies met in four different countries. The Supervisory Commission, which had been entrusted with emergency powers for the war, held its 91st and 92nd Sessions in Montreal in June and July, approving present League activities and voting the next year's modest budget of ten million Swiss francs. Various committees in the economic and

INDUSTRIAL CLASSIFICATION OF DOMESTIC REFINED LEAD SHIPMENTS*

[American Bureau of Metal Statistics]
(In tons of 2,000 lb.)

	1942	1943
Cable.....	143,539	109,486
Ammunition.....	40,163	51,840
Foil.....	7,655	7,715
Batteries.....	58,784	72,166
Brassmaking.....	7,466	6,109
Sundries ^b	68,141	47,435
Jobbers ^b	7,128	5,916
Unclassified ^c	286,071	247,750
Total.....	618,947	548,417

* Primarily lead shipped ex primary refineries, which is mainly virgin lead derived from ore, but into which some lead derived from battery scrap has already entered. Shipments ex primary refineries during 1943 appear to have been accounting for about 50 per cent of the total shipments into consumption.

^b Includes white lead, red lead, litharge, and other oxides; sheet and pipe.

^c Includes white lead, red lead, litharge, and other oxides; sheet and pipe; solder, babbitt, and lead for making tetraethyl for gasoline. Of the lead that goes into the oxides a considerable proportion passes on into the manufacture of storage batteries.

financial field also met during the year, including the Committee on Economic Depressions in Princeton in April, to approve its report for publication, a Committee of Fiscal experts from the Americas in Mexico City in July, to approve three model conventions on Double Taxation, and a meeting of the members of the Economic Committee resident in the Americas in Princeton in December, to consider the application of the Hot Springs and Atlantic City recommendations. Certain other social or humanitarian work also continued, the High Commissioner for Refugees in London doing what was possible in this vast field in connection with the Bermuda and other meetings, the anti-drug agencies also meeting in London in October, and various consultations amongst the Health Committee leading to the standardization of two new sera and an important report on typhus prevention. The permanent staff, which had been divided as the German threat spread over Europe, continued separated, about 80 officials at headquarters in Geneva, the Treasury and Refugee offices in London, the Economic Mission in Princeton, a group of Anti-Drug officials in Washington, as well as about 100 officials of the International Labor Office (q.v.) in Montreal.

Certain other important developments occurred in 1943. On April 15 Generals de Gaulle and Giraud, in their first joint diplomatic action, sent identical notes to the League stating that Vichy's notice of withdrawal from the League was made under foreign pressure and consequently without effect. Several declarations of policy were made in Britain, Prime Minister Churchill on March 21 stating that, for the future, "certainly we must take as our foundation the lofty conception of freedom, law, and morality which was the spirit of the League," and Foreign Secretary Eden and Minister of State Richard K. Law making further sympathetic statements in Parliament. In the United States, frequent references were made to the League in the Senate debate which finally resulted in the resolution for "a general international organization" on lines which were closely similar to the League's; Senator Taft, indeed, proposed use of the League as the framework for international cooperation. Thus, as the year came to a close, it seemed evident that whatever international agency developed from the war, it would certainly embrace the existing League agencies and probably closely follow the general League lines. See SYRIA.

ARTHUR SWEETSER.

LEATHER. See HIDES, LEATHER, AND SHOES.

LEAVE AREA CLUBS. See RED CROSS.

LEBANON, Republic of. See SYRIA AND LEBANON.

LEEWARD ISLANDS, British. A British West Indian colony, consisting of a federation of the four presidencies shown in the accompanying table.

Presidency (Capital)	Sq. mi.	Pop. (1941)
Antigua* (St. John).....	171	39,036
Montserrat (Plymouth).....	32½	13,040
St. Kitts* and Nevis (Basseterre).....	152	38,848
Nevis.....	50	14,441
Anguilla.....	34	5,829
Virgin Islands* (Road Town).....	67	6,720
Leeward Islands (St. John).....	422½	97,844

* Includes the dependent islands of Barbuda (62 sq. m.) and Redonda (1 sq. mi.). † Also known as St. Christopher.

Chief towns St. John (capital), 10,000 inhabitants; Basseterre, 8,000; Plymouth, 2,000; Charles-town, 1,200; Road Town, 400. Education (1938): 112 schools and 17,850 pupils (average attendance).

Production and Trade. The important products are sugar, molasses, cotton, limes, fruits, coconuts, tomatoes, onions, coconuts, and tobacco. In 1941 total imports were valued at £802,262 and total exports at £947,629. Shipping entered and cleared totaled 6,409,408 tons.

Government. Finance (1941): revenue £413,105; expenditure £368,786; public debt £128,780. The administration for the whole colony is headed by a governor, assisted by a federal executive council and a general legislative council. For local government each of the presidencies of Antigua, Montserrat, and St. Kitts-Nevis have their own executive and legislative councils while the Virgin Islands has an executive council. Governor and Commander in Chief, L. B. Freeston (appointed in October, 1943 to succeed Sir Douglas Jardine).

LEGISLATION. See STATE LEGISLATION; TAXATION; UNITED STATES under Congress; articles on foreign countries; also the subject, as LABOR CONDITIONS, SELECTIVE SERVICE, etc.

LEINER CASE. See LAW under War Decisions.

LEND-LEASE PROGRAM. On Mar. 11, 1941, nine months before the Japanese attack on Pearl Harbor, the U.S. Congress passed the Lend-Lease Act, empowering the President to provide goods and services to those countries whose defense he deemed vital to the defense of the United States. Lend-lease goods began to move immediately. From March 11 to May 2, lend-lease operations were in charge of the President's Liaison Committee, headed by Maj. Gen. James H. Burns, in the Office of the Secretary of the Treasury. On May 2, 1941, the work of this committee was entrusted to the Division of Defense Aid Reports in the Office for Emergency Management. This Division had the job of coordinating the efforts of the various Government departments concerned with the lend-lease program.

Since the program was rapidly growing in size and complexity, a separate agency—the Office of Lend-Lease Administration—was established on Oct. 28, 1941, with Edward R. Stettinius, Jr., as Administrator. The Office of Lend-Lease Administration acted as a sort of "holding company" for lend-lease activities. Its functions were policy making, coordinating, expediting, and record-keeping. On Sept. 25, 1943, the President issued an executive order coordinating the civilian agencies operating in the foreign economic field, including the Lend-Lease Administration, in a new agency, the Foreign Economic Administration (q.v.) headed by Leo T. Crowley.

No actual purchasing has been done by the Lend-Lease Administration. In order to integrate the entire war effort of the United States, procurement of lend-lease goods and services has been handled by the agencies best qualified—military goods and services by the War and Navy Departments, merchant ships by the Maritime Commission, the charter and hire of ocean transport by the War Shipping Administration, foodstuffs and agricultural commodities by the Department of Agriculture, and industrial and other nonmilitary products by the Procurement Division of the Treasury Department. Other agencies concerned with the lend-lease program have the following responsibilities: the State Department for negotiating Lend-Lease Agreements with foreign countries; the Munitions Assignments Board for the assignment of munitions; the War Production Board for the allocation of industrial mate-

rials; the Petroleum Administration for War for the allocation of petroleum products; and the Food Requirements and Allocations Committee of the War Food Administration for the allocation of foodstuffs. (See the articles on these agencies.)

Before the United States entered the war, Congress made all appropriations of lend-lease funds direct to the President. Since then, it has continued to make funds available in this manner for nonmilitary goods and services, but has appropriated money direct to the Army and Navy for the munitions requirements of our allies. Until Dec. 1, 1943, a total of \$24,670,000,000 had been appropriated to the President. In addition, there had been authorized the transfer of up to \$35,970,000,000 of military goods and services procured with appropriations to the Army, Navy, and Maritime Commission.

By Dec. 1, 1943, the President had declared the following countries eligible for lend-lease aid:

Argentina	Ecuador	Mexico
Belgium	Egypt	Netherlands
Bolivia	El Salvador	Nicaragua
Brazil	Ethiopia	Norway
British Common-wealth	Fighting France	Panama
Chile	Fr. N. & W. Africa	Paraguay
China	Greece	Peru
Colombia	Guatemala	Poland
Costa Rica	Haiti	Saudi Arabia
Cuba	Honduras	Turkey
Czechoslovakia	Iceland	U.S.S.R.
Dominican Republic	Iran	Uruguay
	Iraq	Venezuela
	Liberia	Yugoslavia

To Oct. 31, 1943, lend-lease has accounted for about 13.5 per cent of the total United States war expenditures. From Mar. 11, 1941, to Oct. 31, 1943, lend-lease aid—goods transferred and services rendered—totaled \$17,533,000,000. Of this amount, \$1,244,000,000 was furnished in 1941, \$7,009,000,000 in 1942, and \$9,280,000,000 in the first ten months of 1943.

Transfers of munitions have accounted for 53 per cent of the total, industrial items for 20 per cent, and foodstuffs and agricultural products for 13 per cent. The remaining 14 per cent has consisted of services rendered. Services include the repair of United Nations vessels in American shipyards, the charter and hire of merchant ships to carry lend-lease goods, the building of factories and shipyards in the United States to manufacture lend-lease articles, the ferrying of aircraft, and the training of United Nations pilots in this country. See also articles on U.S. industries and products affected, as *AERONAUTICS* under *American Aircraft Production*, *FOOD INDUSTRY*, *HIDES*, *MOLYBDENUM*.

From Mar. 11, 1941, to Oct. 31, 1943, shipments of lend-lease goods totaled \$13,844,000,000. Of this, \$5,980,000,000 went to the United Kingdom; \$3,550,000,000 to the U.S.S.R.; \$2,168,000,000 to Africa, the Middle East, and the Mediterranean Area; \$1,603,000,000 to China, India, Australia, and New Zealand; and \$543,000,000 to other areas.

Lend-lease shipments to the United Kingdom have consisted of munitions for offensive action against the enemy, industrial materials for the fabrication of military goods, and foodstuffs for soldiers and war workers. Through October, 1943, munitions have accounted for 40 per cent of total shipments, industrial items for 26 per cent, and foodstuffs and other agricultural products for 34 per cent.

The composition of lend-lease exports to the U.S.S.R. has been quite different from that of goods to the United Kingdom. Munitions, for example, have comprised 56 per cent of lend-lease

exports to the U.S.S.R., industrial items 27 per cent, and foodstuffs 17 per cent.

Among the finished munitions sent to Soviet Russia, there have been more than 6,900 planes (more than to any other lend-lease country), 3,600 tanks, 132,000 sub-machine guns, and 198,000 motor vehicles. We have also made available to the Russian armies 247,000 field telephones and 780,000 miles of field telephone wire for the maintenance of their long lines of communication.

Lend-lease aid to the United Kingdom and the Soviet Union has played an important part in the allied victories over the Axis. The munitions sent to the U.S.S.R. are helping drive the Germans out of Russia. Lend-lease equipment was used effectively by the British First Army in the fighting in North Africa and by the R.A.F. in its devastating raids over Europe.

As the war in Africa, the Middle East, and the Mediterranean area gained in scope and intensity, lend-lease shipments to this area increased. Nearly three-fourths of the exports have been military goods. These helped to equip the British Eighth Army for its drive from El Alamein to Tunisia, and for the campaigns in Sicily and the Italian peninsula.

Lend-lease has aided the United Nations in the war against Japan. Almost two-thirds of the lend-lease supplies sent to the Far East—China, India, Australia, and New Zealand—have been munitions. American guns, ammunition, planes, and tanks are being used by our allies in the fighting in China and the Southwest Pacific. As the war in the Pacific intensifies and our allies further expand their operations, the part played by lend-lease will increase.

In addition to goods shipped to the various theaters of war, lend-lease has helped to develop and maintain the supply lines of the United Nations. Many ships built in the United States with lend-lease funds have been transferred for the duration of the war to Great Britain, the U.S.S.R., and other United Nations. Air routes have been developed with the aid of lend-lease from the United States to the Middle East, U.S.S.R., India, and Australia. Lend-lease has also financed in varying degree the construction of pipelines, supply depots, docks, warehouses, railroads and rolling stock, and plane and truck assembly and repair shops in the Middle East.

Reverse Lend-Lease. Lend-lease has not been a one-way street. Rather, the United Nations have put their resources into a common pool, each according to its ability, for the most effective prosecution of the war.

As of June 30, 1943, the British Commonwealth of Nations reported total expenditures of about \$1,171,000,000 for reverse lend-lease aid to the United States. The United Kingdom spent about \$871,000,000 of this amount; and Australia, New Zealand, and India about \$300,000,000. Based upon estimates for the first six months of 1943, expenditures by the British Commonwealth for reverse lend-lease to the United States are at an annual rate of about \$1,250,000,000. This figure does not include expenditures for supplies transferred by the United Kingdom to American forces in colonial theaters of war. Furthermore, it excludes important raw materials, formerly purchased by us for cash, which the British are now going to provide under reverse lend-lease.

In the British Isles the American forces are receiving without payment by us a wide variety of goods and services, ranging from airfields, bar-

racks, transportation, repair and recreational facilities, to food, ordnance, and aircraft. The British transported a large proportion of the American troops who participated in the North African and Sicilian landings. American ships are serviced and repaired under reverse lend-lease in British ports throughout the world.

Under reverse lend-lease, Australia and New Zealand supply the United States troops stationed in the Southwest Pacific area with approximately 90 per cent of their food requirements, in addition to housing facilities, hospitals, airdromes, articles of clothing, and miscellaneous equipment. Australia provided to the United States forces through June 30, 1943, the following quantities of foodstuffs:

Meat	61,480,000	pounds
Bread, biscuits, and cereals	48,110,000	pounds
Potatoes	29,762,000	pounds
Vegetables and fruit	49,931,000	pounds
Canned foods	28,340,000	pounds
Emergency rations	2,231,000	pounds
Sugar	11,782,000	pounds
Butter	6,628,000	pounds
Condensed milk	8,711,000	pounds
Fresh milk	11,500,000	pints
Fresh eggs	22,000,000	dozen

In the same period New Zealand supplied to our men under reverse lend-lease over 170,000,000 pounds of food, as follows:

Fresh meat	49,650,000	pounds
Canned and smoked meat	21,600,000	pounds
Potatoes	9,150,000	pounds
Other vegetables	24,125,000	pounds
Fruit	10,825,000	pounds
Butter and cheese	12,550,000	pounds
Other dairy produce	10,000,000	pounds
Sugar	7,100,000	pounds
Flour and other cereals	13,725,000	pounds
Miscellaneous supplies	11,475,000	pounds

Reverse lend-lease aid has also been furnished in the Middle East, U.S.S.R., China, and other countries.

The story of reverse lend-lease does not end with the aid received by the United States forces overseas. The British have sent to this country under reverse lend-lease small naval craft, barrage balloons, machine tools for shipyards, benzol, and other industrial products. Our allies have also made available to us specifications for aircraft, guns, tanks, and other weapons, as well as military knowledge of inestimable value gained in hard-won battle experience.

See ALGERIA, ARABIA, AUSTRALIA, BELGIUM, BRAZIL, CHILE, CUBA, LIBERIA, NEW ZEALAND, SOUTH AFRICA, TURKEY, URUGUAY, under *History*; UNITED STATES under *Appropriations*.

JOHN D. EAST.

LEROS. See GREECE under *History*; WORLD WAR under *The Balkans*.

LIBERIA. A Negro republic, founded in 1847 by freed slaves from the United States, on the west coast of Africa between Sierra Leone and French Ivory Coast. Capital, Monrovia (pop. about 10,000.)

Area and Population. Area, about 43,000 square miles; population, variously estimated at from 1,000,000 to 2,500,000. Only about 60,000 of the coast Negroes are considered civilized. Among them are some 12,000 American-Liberians, who form the governing and intellectual class. The primitive natives of the interior belong to six main and numerous smaller tribes, each with its own language. English is the language of government and commerce. There were 261 United States citizens in Liberia on Jan. 1, 1941.

Education and Religion. About 10,000 pupils were

attending 70 government and 80 mission schools in 1938. There are two colleges at Monrovia (one government and one Methodist) and an industrial and vocational school at Kakata. The American-Liberians are Protestant Christians; the indigenous tribes, mainly pagans and Moslems, with some Christian converts.

Defense. In 1941 there was an enlisted Frontier Force of 750 men and a militia of some 4,000 men, organized in 7 infantry regiments. By the agreement of Mar. 31, 1942, the U.S. Government undertook to extend financial and technical aid in the organization of Liberian defense forces. U.S. military forces arrived in Liberia in May, 1942, to assist in the defense of the republic for the duration of the war.

Production. Rubber, produced on the Firestone Company's 1,000,000-acre concession at Marshall, on the coast 40 miles south of Monrovia, is the chief export crop. The 77,000 acres under cultivation in 1941 produced more than 18,000,000 lb. of dry rubber annually. Native coffee, cacao, sugar cane, cotton, piassava fiber, palm oil and kernels, kola nuts, rice, oil seeds, and gold are produced in relatively small quantities. There are rich undeveloped forest, mineral, and agricultural resources.

Foreign Trade. Imports in 1941 were valued at \$3,291,967 (\$2,236,051 in 1940); exports, \$5,096,919 (\$3,242,290). Exports of raw and crepe rubber in 1941 totaled 18,080,788 lb. valued at \$4,987,763 (25,984,985 lb. valued at \$7,353,050 in 1942). For the other 1941 exports and imports, see 1943 YEAR BOOK. The United States was the principal market and source of supply.

Finance. The 1942 budget estimated receipts at \$837,521. Actual collections in 1940 were \$893,617. External bonded debt, \$1,415,000 on Jan. 1, 1941; internal floating debt, \$164,834. The unit of currency is the Liberian dollar. U.S. currency was made legal tender on Nov. 1, 1942. At the official exchange rate fixed on that date \$4 U.S. exchanged for 1 pound sterling or for 4.80 Liberian dollars. Under the terms of a loan contract, the government has an American financial adviser.

Transportation. Transportation in the interior is carried on mostly by porters. There are no railways. Highways extended 345 miles in 1942. The St. Paul River is navigable for 25 miles. In 1941 Monrovia became an alternate stopping point in the ferry service for military planes established between the United States and Egypt, and a regular station on the new Pan American Airways route between New York and Leopoldville, Belgian Congo. Marshall and Monrovia are the principal harbors. All cargoes must be loaded or unloaded by surfboats or lighters. In 1940, 245 ships of 715,797 registered tons entered the ports.

Government. While the Constitution is modeled on that of the United States, suffrage is restricted to Negro landowners. The True Whig party, dominated by a small oligarchy of American-Liberian families at Monrovia, has controlled all branches of the government since 1878. President in 1943, Edwin Barclay, inaugurated Jan. 6, 1936, for an eight-year term. The bicameral legislature, composed of 10 Senators and 21 Representatives, consisted entirely of True Whigs. The United States-Liberian agreement of Mar. 31, 1942, gave the U.S. Government the right to construct and operate airports in Liberia for the duration of the war, to defend any part of the republic from enemy attacks, to extend the Liberian road system, to assist in the reorganization and equipment of Liberian forces, and to maintain jurisdiction over U.S. military and civilian personnel stationed in Liberia (see

1943 YEAR BOOK, p. 377). For 1943 developments, see below.

History. United States-Liberian relations were placed on a more intimate plane of cooperation during 1943 as a result of an exchange of Presidential visits. En route home from the Casablanca Conference, President Roosevelt made a side air trip from Bathurst, Gambia, to Monrovia to meet President Edwin Barclay and to inspect U.S. troops on January 27. On May 6 it was announced that William V. Tubman, also of the True Whig party, had been elected to succeed Barclay at the expiration of his term on Jan. 3, 1944. Charles L. Simpson, Liberian foreign secretary since 1934, was chosen Vice President. Soon afterwards President Barclay and President-elect Tubman journeyed to Washington to visit President Roosevelt in response to an invitation delivered during Roosevelt's Liberian visit. They were overnight guests at the White House on May 26-27 and then made a tour of U.S. war plants and cities before returning to Liberia.

On January 11 President Roosevelt declared the defense of Liberia vital to the defense of the United States, opening the way for lend-lease aid. The two Governments on June 8 signed an agreement on the principles applying to mutual aid in their common defense, in conformity with the Lend-Lease Act. New U.S. combat units arrived in Liberia in March to relieve the forces that landed during 1942 (see 1943 YEAR BOOK). The new troops proceeded to carry forward the road-building and other defense projects and the training of Liberian forces provided for in the special treaty of 1942 and in the 1943 lend-lease agreement. The importance of these defense installations was emphasized by Henry S. Villard of the State Department on August 19. "I do not doubt," he said, "that in any plans which may be worked out for international security after the present conflict, Liberia—across the way from the bulge of Brazil—will be one of the focal points of special importance to the Americas."

LIBERTY SHIPS. See MARITIME COMMISSION; SHIP-BUILDING.

LIBRARY PROGRESS. During 1943 the major activities of libraries and librarians were devoted almost entirely to the war effort and to planning for the postwar period. Libraries continued as war and consumer information centers; supplied technical information to industrial defense workers and students; disseminated information in the fields of economics, government, history, and international relations; made available interpretations of current facts and events; supported domestic and international postwar planning; and helped relieve the strain of war by providing recreational reading. Beginning with a National Institute on War and Postwar Planning in Chicago in January, a series of 18 regional and many local institutes were conducted to give librarians in comparatively small groups an opportunity to inform themselves with the help of specialists in these fields.

A "Conference in Print" is planned for early 1944 with the theme "Preparing for Postwar Library Service." Among the subjects to be discussed by librarians and others in the *American Library Association Bulletin* are the opportunities for educational service afforded to libraries by demobilization and readjustment, postwar cultural relations with other nations, and books which influence American thought and action.

Upon request of the military authorities, a second

Victory Book Campaign was sponsored in 1943 by the A.L.A., American Red Cross, and United Service Organizations. Some 17,000,000 books were collected during the past two years and of that number about 10,000,000 were distributed to the Army, Navy, and Merchant Marine, War Prisoner's Aid, War Relocation Centers, and selected industrial areas.

Because of the importance of government publications, especially during wartime, the A.L.A. Executive Board sponsored a study of *Government Publishing in Wartime* (see *College and Research Libraries* IV: 100-106, 119, March, 1943). This report presented observations and suggestions based on the needs of educators, students, scholars, professional organizations, colleges, universities, schools, and libraries; as well as the usefulness of such persons and agencies to the government in getting the right distribution of such publications.

Increased attention has been given to postwar plans for libraries. The first step in planning was this year's publication of *Postwar Standards for Public Libraries* which sets up new goals for library service, size and area of library units, the book collection, technical processes, personnel, finance, and buildings. A survey and evaluation of present library service in terms of the standards is in process and later actual plans will be made with State, regional and Federal participation, it is hoped. It is recommended that \$200,000,000 a year be spent in the postwar period for the maintenance of public libraries and that \$400,000,000 be spent in capital outlays. In 1940, \$50,000,000 was spent for maintenance and \$3,000,000 for capital outlays. Recommended per capita expenditures for library support are: \$1 for limited or minimum service, \$1.50 for reasonably good service, and \$2 for superior service.

Among other postwar planning studies are: a report on what libraries can do to assist in the demobilization and rehabilitation of men and women from the armed forces and war industry; a report summarizing the planning activities of various library groups and presenting suggestions concerning areas in which planning is needed and problems for which solutions should be sought; and a report on the readjustment of librarians to the conditions which will prevail after the war. For details of 1943 library war activities and postwar plans, see all issues of the *A.L.A. Bulletin*, *College and Research Libraries*, *Library Journal*, and *Wilson Library Bulletin*.

Because of the war, international aspects and developments have greatly increased. The most important project was the completion of plans and the establishment, by means of funds from the Rockefeller Foundation, of the A.L.A. International Relations Office in Washington, headed by Dr. Harry Miller Lydenberg.

In addition to work in the Latin American field mentioned in *Societies under Library Association, American*, the following are 1943 developments: the foundation of a library school at the *Escola Livre de Sociologia e Política* in São Paulo, Brazil; the preparation of a union catalog of library resources, the development of micro-film service and the organization of a short library institute in Mexico City; the formation of a bibliographical center for the cataloging of books for the University of Buenos Aires; the conducting of courses of library science in the National Library of Brazil; the formation of the Chilean Library Association (*Asociación de Bibliotecarios de Chile*); the establishment of a small American library in Saltillo, Coahuila, Mexico; and the assistance United States

librarians are giving in the reconstruction of the National Library of Peru, which was destroyed by fire on May 10, 1943. In connection with this last project, the Secretary of State appointed a committee which sent representatives to Peru in August to confer with the new director of the National Library, Dr. Jorge Basadre, regarding the planning of a new building. Books and materials, to replace those destroyed, are being provided by many individuals, libraries, institutions, and governments of the Americas.

Many libraries throughout the devastated war areas have been destroyed by bombs and fires or their collections looted by the enemy. Information concerning these is being collected in connection with postwar planning for reconstruction and development. In connection with these problems, the A.L.A. submitted recommendations to the State Department on ways in which libraries can contribute their share to cultural rebuilding of the world; and on policies effecting libraries outside the United States now and after the war.

Contacts are being maintained with the Library Association and other organizations of Great Britain regarding war and postwar plans. British librarians are purchasing large quantities of American books with a special fund of \$100,000 provided by the Carnegie United Kingdom Trust, to learn about the United States. As a gesture of reciprocity, the A.L.A. International Relations Board sponsored a British Book Week in American libraries, Oct. 24-30, 1943, with the cooperation of the British Information Services, Books Across the Sea, and the English-Speaking Union.

During the fall of 1943, five United States libraries were established in other countries by the British Division of the Office of War Information in close cooperation with the Division of Cultural Relations of the Department of State and with the Library of Congress. Following the pattern established for the American Library in London, the new libraries are located at Sydney and Melbourne, Australia; Wellington, New Zealand; Johannesburg, Union of South Africa; and Bombay, India.

State and Federal Aid. During the year there was an increase of State aid to libraries and appropriations to State library agencies, due in part to the discontinuance of WPA library service. Another result of discontinued WPA library service is the interest expressed by a few congressmen in some type of Federal aid to libraries. Considerable growth has been noted in county library service. At present 631 counties receive library service, compared to 592 a year ago. All States, excepting Arizona, now have State library extension agencies. State aid for school libraries is also on the increase and in most cases the funds allocated by the State to a community are matched locally.

Notwithstanding the increased aid to libraries, there are still 35,000,000 people in the United States without library service; most of them in the rural areas. During the year *Public Library Statistics, 1938-39* was published by the U.S. Office of Education. The 1942 general and salary statistics for public libraries in the United States were published in the April, 1943 issue of the *A.L.A. Bulletin*. Similar statistics for college and university libraries were included in *College and Research Libraries* for March, 1943.

Library Training and Personnel. Prior to the outbreak of the war, the annual placement of library school graduates was 100 per cent, leaving no reserve to offset the unusual number of positions that have developed in wartime. This year many more librarians have gone into the armed services than

last year. Hundreds of librarians have been drawn into government libraries, defense work, and library service for the Army and Navy. During 1942-43 there were about 1,200 students enrolled in the 34 accredited library schools of the United States and Canada, which is about 600 less than the 1940-41 enrollment. At the present time the turnover in library positions has reached an all-time record and it is expected that there will continue to be a great shortage of librarians within the next few years. The subject of salaries for librarians has received considerable attention during the past several years, resulting in the publication this year of three volumes on *Classification and Pay Plans for Libraries in Institutions of Higher Education*.

Grants, Gifts and Buildings. Throughout the year, grants totaling about \$415,000 have been made to the A.L.A. for some fifteen projects, ranging from \$1,200 to \$125,000. A three-year grant was made to the Library of Congress by the Rockefeller Foundation for the acquisition and temporary storage of new commercial films having documentary significance. Tuskegee Institute also presented its outstanding collection of Booker T. Washington material to the Library of Congress. Funds and bequests of the year include: a \$1,000,000 bequest from Mrs. James C. Stodder to the Bangor (Me.) Public Library. See *PHILANTHROPY*.

Gifts of books and collections include: the Theodore Roosevelt collection of books and material to Howard College Library from the Roosevelt Memorial Association; ten tons of general office correspondence and records covering the period of 1850 to 1887 to the Newbery Library, Chicago, from the Burlington and Quincy Railroad; the \$1,000,000 Thomas Mann literary collection purchased by W. T. Grant for the University of Kansas City Library.

Due to the war, practically no new library buildings were started. The following are among those completed in 1942 or early 1943: Lake View Branch of Chicago Public Library and Logansport (Ind.) Public Library; memorial libraries in Hillsdale, Ill.; Limestone, Me.; and North Branford, Conn.; and libraries at Union Theological Seminary, Richmond, Va.; and St. Mary's College, Holy Cross, Ind. The first unit of the new District of Columbia Public Library was finished and priorities received for the completion immediately after the war.

See *ROCKEFELLER FOUNDATION; PERU*.

Publications. The A.L.A. Department of Publishing and Cooperative Services considered some 100 publishing projects during the year and published the following: *Rue, Subject Index to Books for Primary Grades and Subject Index to Books for Intermediate Grades* (first supplement); *War and Postwar Issues; Proceedings of the National Institute of the A.L.A.*; *Pomeroy, ABC's for Hospital Libraries*; *Doe, Handbook of Medical Library Practice*; *Rossell, Public Libraries in the Life of the Nation*; *Hadley, John Otton Dana, a Sketch; Post-War Standards for Public Libraries*; *Power, Work with Children in Public Libraries*; *Mann, Introduction to Cataloging and Classification of Books* (2nd Ed.); *Thompson, A.L.A. Glossary of Library Terms; Classification and Pay Plans for Libraries in Institutions of Higher Education* (3 Vol.) and a series of buying and reading lists related to the war. Books issued by other publishers include: *Butler, The Reference Function of the Library*; *Manley, Public Library Service in Business*; *Mason, The Patient's Library; a Guide-Book for Volunteer Hospital Library Service*; *Who's Who in Library Service*; and *Basset, A Cataloging Manual for Law Libraries*.

MILDRED OTHMER PETERSON.

LIBYA. An Italian colony in North Africa; conquered by British and allied armed forces, 1942-43. Area, 679,358 square miles; population (Jan. 1, 1939), 888,401, including 793,225 natives (763,179 Moslems and 30,046 Jews), 89,098 Italians, and 6,078

other Europeans. Chief towns: Tripoli (capital) 108,240 inhabitants in 1939, Bengasi 64,641, Misurata 45,097, Homs 34,940, and Derna 21,547. Ghadames, Sinauen, Mizda, Murzuk, and Ghat are important caravan stations in the interior.

Production and Trade. Barley, dates, olives, oranges, lemons, almonds, vegetables, salt, sponges, fish, and tobacco were the main products. Livestock (1938): 820,323 sheep, 726,006 goats, 91,782 camels, 69,670 cattle, 55,676 donkeys, mules, and horses. Trade (1938): imports 882,057,532 lire; exports 108,961,545 lire (lira averaged \$0.0526 for 1938; \$0.0520, 1939). Shipping (1938): 5,545 ships entered and landed 696,890 tons of freight and 127,458 passengers; 2,549 ships left with 76,190 tons of freight and 122,521 passengers. Roads (1940): 8,342 miles.

Government. Budget (1939-40): 600,115,000 lire. The colony comprises four provinces (Bengasi, Derna, Misurata, and Tripoli), and a military territory in the south (capital, Hun), called Libyan Sahara. On Jan. 9, 1939, the four provinces of Libya were incorporated in the national territory of Italy.

History. Continuing its epochal drive from Egypt, the British Eighth Army stormed into the city of Tripoli on Jan. 23, 1943. By the end of that month German and Italian forces were driven out of the whole of Libya. Before evacuating Tripoli, German troops entered the ghetto and summarily executed a number of leading Jews. The incoming British immediately established military rule over the whole of Libya. Brig. M. S. Lush, installed as military governor under the military commander, brought with him a fully trained staff of 80 officers of the Occupied Enemy Territory Administration.

The British rescinded the anti-Jewish laws, began the distribution of essential foodstuffs to the disorganized and distressed population, instituted price-fixing to curb profiteering, interned Fascist leaders, closed Fascist clubs and cultural centers, and forbade the use of Fascist textbooks or the teaching of Fascist doctrines in the Italian schools. Otherwise little change was made in the former Italian administration. Italian law remained the basis of civil government and some Italian administrators were retained at their posts.

The currency was stabilized by the introduction of British military scrip, to which the lira was pegged at 480 liras to the pound. Steps were taken to restore banking, communications, trade, and agriculture. In Cyrenaica Arabs took over many farms abandoned by the Italians and cultivated them under British supervision. The British and Egyptian authorities jointly undertook the widening and improvement of the coastal highway linking Tripoli and Alexandria.

The decision as to the future of Libya was postponed until after the war. However Prime Minister Churchill on September 21 declared that the Italian empire had been "irretrievably lost." (On Jan. 8, 1942, Foreign Minister Eden had given a pledge that "at the end of the war the Senussi in Cyrenaica will under no circumstances again fall under Italian domination.") Several battalions of Senussi tribesmen under British officers assisted in driving the Axis forces from Libya. The Arab population of Tripolitania, freed of many of the restrictions imposed by the Fascist regime, was also reported friendly to the British. For the first time in 30 years they were allowed complete freedom to celebrate the Moslem festival of Bairam. This evoked a demonstration of thanksgiving by 100,000 Arabs in Tripoli on October 6.

On June 21 King George VI visited Tripoli during his Mediterranean tour of British battle fronts.

He reviewed units of the British Eighth Army and Allied forces and greeted both the Grand Mufti and Chief Rabbi of Tripolitania.

LIECHTENSTEIN. A principality of Central Europe, adjoining Switzerland on the east. Area, 65 square miles. Population (1941 census), 11,218. Capital, Vaduz (2,020 inhabitants). Chief products: corn, wine, fruit, wood, marble. Main industries: cotton spinning and weaving, leather goods, pottery, and livestock raising. Liechtenstein belongs to the Swiss Customs Union; Swiss currency is used. Budget estimates (1942): revenue 2,243,000 francs; expenditure 2,239,000 francs. Public debt, Dec. 31, 1941, 5,810,000 francs (Swiss franc averaged \$0.2321 for 1941; official rate \$0.2320 during 1942). Reigning Prince, Francis Joseph II (succeeded Aug. 25, 1938).

LIFESAVING EQUIPMENT AND MEASURES. See COAST GUARD; RED CROSS.

LIPPE. See GERMANY under *Area and Population*.

LIQUID FUEL. See CHEMISTRY under *Petroleum Gases*; COAL; MINES, BUREAU OF.

LIQUOR INDUSTRY. The alcoholic beverage industry, which has in the ten years since Repeal accounted for over ten and a half billion dollars in taxes, continues to be the nation's largest collector of internal revenues. In the fiscal year ending June 30, 1943, the alcoholic beverage industry accounted for \$1,423,646,457 in Federal taxes alone.

During 1943, the industry was faced with the problem of an abnormal demand, aggravated by hoarding and speculative buying, and a subnormal supply. The shortage which resulted showed no signs of abating as the year came to an end, and it became evident that no relief is possible until some partial resumption of beverage distillation is permitted.

The reason for the shortage is simple. Since Oct. 8, 1942, not a gallon of whiskey has been manufactured. The distilling industry's facilities have been engaged exclusively in the manufacture of war alcohol to be used in making smokeless powder, synthetic rubber, medicines, anti-freeze, and other war essentials. Almost half of the war alcohol produced in 1943 was produced by the beverage distilleries.

On Dec. 31, 1943 (the last date for which Government figures are available at this writing) the Alcohol Tax Unit of the Treasury Department reported 385,348,781 gal. of whiskey in government warehouses. This compares with the normal inventory of 510,930,550 gal. in government warehouses on Dec. 31, 1941. These figures, however, refer to the amount of whiskey originally placed in the barrels. There is a certain percentage of this total lost through soakage and evaporation. According to Government tables this loss amounts to about 24 per cent of the total. Thus, on Dec. 31, 1943, there were actually only 292,865,074 gal. of whiskey in these warehouses.

Withdrawals during the calendar year of 1943 were necessarily lower than during 1942. In order to provide a continuity of supply distillers have adopted self-imposed rationing plans.

Whiskey is not a product which can be consumed immediately upon its production, but must be set aside for aging before it is fit for drinking. Prior to the war, the distilling industry, while producing continuously to replace losses by sales and natural evaporation, carried an inventory of at least 500 million gal. which it considered necessary in order to maintain reasonable standards of quality. For the purpose of avoiding a repetition of condi-

tions which existed in 1934, following the repeal of prohibition, when young and immature whiskey was offered to the public, it is believed necessary in the public interest that some reserve be maintained for postwar requirements. Otherwise, there will be a bone dry period following the war, or the public will be compelled to drink green, insufficiently aged whiskey.

Since the entire whiskey stocks available at the end of 1943 were already dangerously lower than normal inventory needs, the reserving of not less than 100 million gal. was considered imperative, even though entirely inadequate. Consequently, as the year drew to a close there were approximately only 197 million gal. of whiskey actually available for consumption. At the present unprecedented rate of demand, if the producers were to abandon their self imposed rationing plans, this would last certainly less than a year, unless some resumption of distilling is permitted.

Stoppage of production of gin on Oct. 8, 1942, created an even greater shortage of this product than exists in whiskey. Withdrawals of gin during the last six months of 1943 amounted to 47,750 gal. as compared to the normal figure of 3,045,309 gal. during the same period of 1941. Since gin does not usually require aging, it was pointed out, there were no large stocks on hand and the shortage developed soon after the stopping of distillation.

During the fiscal year ending June 30, 1943, production of brandy amounted to only 16,579,064 gal. as compared to 29,273,293 gal. during the previous fiscal year. Yet during the fiscal year ending June 30, 1943, taxpaid withdrawals of brandy amounted to 5,435,584 gal. as compared to 2,159,091 gal. during the previous fiscal period.

See BUSINESS REVIEW; CUSTOMS, BUREAU OF; STATE LEGISLATION; TAXATION.

FRANK KANE.

LISTENING POSTS. See FEDERAL COMMUNICATIONS COMMISSION.

LITERATURE, American and British. For publishers, 1943 seemed a great year. Almost everything sold, and the public appetite for books both in America and Britain seemed unappeasable. Titles went out of print with astonishing rapidity. Though the restrictions on paper, already heavy in Britain, grew heavier in America, the publishers had much reason to be happy.

But the evidence indicated that the writers were not happy, at least, not the writers whose works made some pretensions to imagination and permanent value. For them, 1943 seemed a year of pause. They could be topical, and meet the public demand for information or thought about the war. But the war was too close, too overwhelming, and especially too changeable. On the other hand, to ignore the war was to falsify their own and the public's most intense preoccupation, to lapse into empty escapism. So the output in the larger imaginative forms, as fiction, poetry, drama, was rather thin, in quality if not in quantity. The happiest writers worked in biography and history, where the past seemed to have some relevance to the present without being dominated by it. And in these writers' works could perhaps be detected the first signs of that larger synthesis of events and nature which will guide the more creative writers in the future.

Biography. The year's real riches could be found in this field, especially in autobiography. All kinds of people were able to write about themselves with vitality and charm. Harold L. Ickes'

Autobiography of a Curmudgeon made him friends, even though he was a reformer and bureaucrat. *Connecticut Yankee*, by Wilbur L. Cross, described his career as scholar and politician winningly. Woody Guthrie's *Bound for Glory* told of a slumdweller and tramp who could write with astonishing force and beauty, while Vincent Sheean spent his time between 1935 and 1942 among the great and luxurious, and called it *Between the Thunder and the Sun*. Mrs. Belloc Lowndes thought of her youth in France and England *Where Love and Friendship Dwelt*. Louise Randall Pierson's *Roughly Speaking* described her life of ups and downs. The doctors had their customary say in *Burma Surgeon*, by Gordon S. Seagrove; *A Surgeon's World*, by Max Thorek; and *Exploring the Dangerous Trades*, by Alice Hamilton, an industrial physician. Edward R. Hewitt's *Those Were the Days* described an almost forgotten New York in an inventor's childhood and youth. Katharine Butler's *The Little Locksmith* was the fantastic imagining of an invalid child. Lloyd Morris' *A Threshold in the Sun* told little about the career but much about the ideas of an intellectual. Three naturalists reported themselves: Roy Chapman Andrews in *Under a Lucky Star*; Thomas Barbour in *Naturalist at Large*; Edwin Way Teale in *Dune Boy*. C. Kay-Scott (Frederic Creighton Wellman) found *Life Is Too Short* but full of adventure. Ferris Greenslet's *Under the Bridge* told the life of a Boston publisher. H. L. Mencken's *Heathen Days 1890-1936* were full of gusto. Robert Traver, in *Trouble Shooter*, described the work of a public prosecutor in upper Michigan. *Boot Straps*, by Tom M. Girdler, gave the career and ideas of an industrialist. Kathleen Coyle's *The Magical Realm* told about a childhood in North Ireland. Three foreigners found much to admire in America: a Czech, Hans Natonek, in *In Search of Myself*; Salom Rizk, in *Syrian Yankee*; and a Chinese, Pardee Lowe, in *Father and Glorious Descendant*. A playwright was revealed in Channing Pollock's *Harvest of My Years*, and a stage designer in Lee Simonson's *Part of a Lifetime*. John Erskine thought his *The Complete Life*, and Frank Kingdon told how he climbed *Jacob's Ladder*. Charles B. Driscoll's family were *Kansas Irish*. Joseph Bromley's *Clear the Tracks!* was about railroad-ing. Emily Kimbrough told how *We Followed Our Hearts to Hollywood*.

In biography the interest in American personalities was marked, as it was also in history. Hamilton Basso's *Mainstream* tried to describe the American character by biographies of such figures as Cotton Mather, Jefferson, P. T. Barnum, and others. The extraordinary career of *Judah P. Benjamin* was vividly portrayed by Robert Douthat Meade, and other Civil War figures were given in *Mr. Lincoln's Wife*, by Anne Colver, and *Gideon Welles*, by Richard S. West, Jr. Henry Seidel Canby published a scholarly *Walt Whitman*, and DeLancey Ferguson *Mark Twain: Man and Legend*, both these trying to clear up old misconceptions. The Jefferson bicentennial prompted three books: Marie Kimball's *Jefferson: the Road to Glory, 1743-1776*; Hendrik Willem van Loon's *Thomas Jefferson*; and a collection of appreciations edited by James Waterman Wise, *Thomas Jefferson Then and Now*. In *Giants Gone: Men Who Made Chicago*, Ernest Poole told of McCormick, Armour, Field, Pullman, and others. American musicians appeared in: *The Story of George Gershwin*, by David Ewen, and *Charles T. Griffes*, by Edward M. Maisel. Carleton Mabree made a case for Samuel F. B. Morse as *The American*

Leonardo. Robert P. Parsons' *Trail to Light* was about Dr. Joseph Goldberger. In *Lonely Midas*, Henry Emerson Wildes gave the life of Stephen Girard. Max Lerner edited from speeches, letters, and other writings *The Mind and Faith of Justice Holmes*. The Negro scientist appeared in Rackham Holt's *George Washington Carver*, and a devoted Negro worker for abolition in Earl Conrad's *Harriet Tubman*. Katherine Burton's *Celestial Homespun* had to do with Isaac T. Hecker, founder of the Paulist Order. Eric F. Goldman gave John Bach McMaster: *American Historian*, and Louise Fargo Brown called Lucy M. Salmon, the Vassar historian, *An Apostle of Democracy*. Hubert H. Hoeltje, in *Sheltering Tree*, described the friendship of Emerson and Bronson Alcott, and John Skelly Terry edited *Thomas Wolfe's Letters to His Mother*. George Coleman Osborn's *John Sharp Williams* showed a memorable politician, and Isaac Don Levine described *Mitchell: Pioneer of Air Power*.

Richard Aldington, usually cynical, especially about soldiers, wrote an admiring biography of *The Duke* (of Wellington). Maisie Ward studied and explained *Gilbert Keith Chesterton*. Blanche Colton Williams found Keats *Forever Young*. Catherine Macdonald Maclean saw William Hazlitt as *Born under Saturn*. Theodore Maynard, as a Roman Catholic, attacked *Queen Elizabeth*. Hesketh Pearson's sprightly pen sketched *Conan Doyle*. In *The Desire to Please* Harold Nicolson described an eighteenth-century ancestor of his, Archibald Hamilton Rowan. Ernest Campbell Massner tried to revive *The Forgotten Hume*. René Kraus wrote about *Young Lady Randolph* (Churchill), the prime minister's mother. Arthur Ponsonby's *Henry Ponsonby: Queen Victoria's Private Secretary* shed new light on the Queen.

Geoffrey Bruun's *Clemenceau* was brilliantly done. Philip Guedalla compared *The Two Marshals: Bazaine, Pétain*. Jan Fortune and Jean Burton described a great eccentric in *Elisabet Ney*. Eugénie, a great favorite with biographers, was this time called *The Innocent Empress* by Erna Barschak. Two Biblical characters appeared: *David*, by Alfred Duff Cooper, and *Joshua*, by Rogers MacVeagh and Thomas B. Costain.

Criticism and History of Literature. Output in this area was unusually thin in 1943, perhaps naturally. Fiction received most attention, as in Edward Wagenknecht's *Cavalcade of the English Novel*, a distinguished one volume history; Lionel Trilling's study, *E. M. Forster*; and Ellen Glasgow's *A Certain Measure*, discussion of aims and values in fiction, especially her own. Edmund Wilson edited an anthology of literary criticism, *The Shock of Recognition*, by American writers on American writers. Jacques Barzun discussed *Romanticism and the Modern Ego* in the Western World, a history of ideas; and Floyd Stovall, in *American Idealism*, described its continuing force in our literature. Leon Howard published a scholarly volume on *The Connecticut Wits*. Oscar James Campbell's *Shakespeare's Satire* was concerned mainly with the "dark" plays. Alan R. Thompson's *The Anatomy of Drama* was brilliant, thorough, and sound. Robert P. Tristram Coffin discussed *The Substance That is Poetry*. Robert Graves and Alan Hodge, in *The Reader over Your Shoulder*, criticized amusingly a number of contemporary writers and laid down laws for good writing. Sir Max Beerbohm praised *Lytton Strachey*.

Drama. In a year when even very ordinary plays ran for months, promising new playwrights might be expected to appear. But the old standbys held

the field, except, perhaps, for *The Army Play by Play*, a collection of one-acts by enlisted men. Moss Hart's *Winged Victory* gave the Air Force exciting treatment. Joseph Fields' *The Dough-girls* showed a tense and vulgar Washington in war time. Noel Coward's *This Happy Breed* showed England in war, but his *Present Laughter* was completely escapist. Philip Barry's *Without Love*, S. N. Behrman's *The Pirate*, and John van Druten and Lloyd Morris' *The Damask Cheek* added little to these established playwrights' reputations. *Strip for Action*, by Howard Lindsay and Russel Crouse, was a collection of vaudeville acts, made to look like a play. Florence E. Ryerson and Colin Clements did a rather tame biography of Harriet Beecher Stowe in *Harriet*. James Gow and Arnaud d'Usseau's *Tomorrow the World* showed a Nazi child in an American home. *Dark Eyes*, by Elena Miramova and Eugenie Leontovich, was about some charming Russians, also in an American home. Sean O'Casey published *Red Roses for Me*, a play about an unlucky artist. (For plays produced but not necessarily published, see THEATER.)

Essays. The meaning and value of American life seemed to provide essayists with material, as Charles A. Beard, in *The Republic: Conversations on Fundamentals*, mainly political; Donald Culross Peattie, in *Journey into America*, mainly historical; Carl Sandburg, in *Home Front Memo*, odds and ends, mainly topical; Pearl S. Buck, in *What America Means to Me*, the issues of war and peace; Philip Wylie, in *Generation of Vipers*, lively and bitter abuse of American mores. Not evaluating, but good reporting, were *Excuse My Dust*, by Belamy Partridge, about the early days of the automobile, and *Copper Camp*, about Butte, Montana, by the Montana Writers Project, WPA. Albert Jay Nock's *Memoirs of a Superfluous Man* was scarcely autobiography but a collection of unusual opinions and judgments instead. Humorist Stephen Leacock told *How to Write*, and humorist Robert Benchley found *Benchley Beside Himself*. Alexander Woolcott's *Long Ago* was anecdotal, and so was Katharine Brush's *Out of My Mind*. D. W. Brogan delightfully explained *The English People* to Americans.

Fiction. As widely read and praised as any novel of the year was John P. Marquand's *So Little Time*, about a man who had fought in the First World War and was frightened by this. The book should have frightened its readers, for it revealed a despair of our civilization which may be widespread. A first novel by Betty Smith, *A Tree Grows in Brooklyn*, was a tender story of a slum childhood and youth, immensely popular. Richard Llewellyn surprised his readers with *None But the Lonely Heart*, about an underworld cockney, very different from his *How Green Was My Valley* of 1939. C. S. Forester's *The Ship* told of a light cruiser in the Mediterranean. Also concerned with war was Pearl S. Buck's *The Promise*, continuing her *Dragon Seed* of last year, but with action laid in Burma. John Dos Passos published *Number One* about a demagogue, and Sinclair Lewis *Gideon Planish* about an uplifter, both satirical. Hervey Allen's *The Forest and the Fort* was the first of a series of six historical novels, this one of the French and Indian War. *Indigo*, by Christine Weston, studied all strata of life in India. The fourth volume of the Danny O'Neill series was *My Days of Anger*, by James T. Farrell, and the fourth of the Lanny Budd series was *Wide Is the Gate*, by Upton Sinclair, who also satirized the Blessed Virgin in *Our Lady*. *The Conspirators*, by Frederic Pro-

kosch, told of murder and violence in Lisbon in 1940.

Vardis Fisher's *Darkness and the Deep* was the first of a series intended to tell about Man from the beginnings of the Earth. Mr. Fisher also published *The Mothers*, about the Donner party. J. B. Priestley, with *Daylight on Saturday* and *Black-out in Gretley*, described war industry, a subject quite fashionable this year, as shown by Glenda Swarthout's *Willow Run*, the bomber plant, Francis Wallace's *Explosion*, a coal mine, and Edward J. Nichols' *Danger—Keep Out*, an oil refinery.

Some good historical novels were: Howard Fast's *Citizen Tom Paine*; Hugh Walpole's last and incomplete story of the Herries, *Katherine Christian*, the early 17th century; Conrad Richter's *The Free Man*, an indentured servant in the Pennsylvania colony; Daphne du Maurier's *Hungry Hill*, a 19th century melodrama laid in Ireland. In *Against This Rock*, Louis Zara told about Charles V of Spain, and in *Grand Parade*, G. B. Lancaster described Nova Scotia in the early 1800's.

Vincent McHugh's *I Am Thinking of My Darling* imagined a convention-destroying disease sweeping New York City. Robert Nathan, in *But Gently Day*, sent his central character three generations back from now. Political novels included Walter Duranty's *Search for a Key*, a foreign correspondent; Berry Fleming's *Colonel Effingham's Raid*, corruption in the South; Francis Hackett's *The Senator's Last Night*, Washington in war time. First novels to attract attention: Elizabeth Jane-way's *The Walsh Girls*; Jerre Mangione's *Mount Allegro*, about Sicilian-Americans; Laura Z. Hobson's *The Trespassers*, refugees and New Yorkers; Ira Wolfert's *Tucker's People*, about the policy racket. Novels dealing directly with this war were pretty undistinguished, but Storm Jameson's *Cloudless May*, about the fall of France, Louis Golding's *No News from Helen*, who was in Malaya, and Edmund Gilligan's *The Ringed Horizon*, about fishermen against submarines, might be mentioned, with James Hilton's *The Story of Dr. Wassell*, written as if fiction, and advertised by the President's mention.

An adolescent puzzled by the adult world was shown in Jerome Weidman's *The Lights around the Shore*. *Capricornia*, by Xavier Herbert, about North Australia, was full of violence. Joseph Freeman's *Never Call Retreat* was highly intellectual. William Saroyan's *The Human Comedy* was written after the movie script, perhaps the first time this was done. A wandering American family appeared in *The Big Rock Candy Mountain*, by Wallace Stegner. Lewis Browne described American fascism in *See What I Mean?* Ilka Chase was sophisticated in *In Bed We Cry*. Martin Flavin's *Journey in the Dark*, about a successful failure, won a prize. Caroline Slade's *Lilly Crackell* couldn't say no. Robert Penn Warren's *At Heaven's Gate* exposed evil in the South. Jesse Stuart's *Taps for Private Tussie* gave a hillbilly family, and Gladys Hasty Carroll a Maine one in *Dunnybrook*. Taylor Caldwell published a good melodrama in *The Turnbells*, and a historical novel of France in Richelieu's time, *The Arm and the Darkness*.

Outstanding among collections of short stories was Isak Dinesen's *Winter's Tales*, mystical, strange, unworldly. Stephen Leacock's *Happy Stories* were meant to be laughed at. The New Yorker magazine's peculiar type of story could be found in Robert M. Coates' *All the Year Round*; John Cheever's *The Way Some People Live*; and Sylvia Townsend Warner's *A Garland of Straw*. Various authors wrote *The Ten Commandments*,

against the Nazis. Joseph Mitchell's *McSorley's Wonderful Saloon* was in downtown New York. Martha Foley edited *The Best American Short Stories 1943*.

History. Publications in American history were many, varied, and interesting. Bernard DeVoto claimed that American history was changed in *The Year of Decision: 1846*, to fill and annex the West. James Truslow Adams' *The American* showed how he became what he is as a national type, and something similar was done by Gerald W. Johnson, with a stronger biographical slant, in *American Heroes and Hero-Worship*. The Revolutionary period was studied in: *Origins of the American Revolution*, by John C. Miller; *The Revolutionary Generation, 1763-1790*, by Evarts Boutell Greene; *Mutiny in January*, in the Continental Army in 1781, by Carl Van Doren; *This Was New York: the Nation's Capital in 1789*, by Frank Monaghan and Marvin Lowenthal. Writings of privates and noncoms were collected in *Our Soldiers Speak, 1775-1918*, by William Matthews and Dixon Wecker, and in *The Life of Johnny Reb*, by Bell Irvin Wiley. Irving Stone discussed and rated defeated candidates for the Presidency in *They Also Ran*. Douglas Southall Freeman continued his study of command in vol. ii of *Lee's Lieutenants: Cedar Mountain to Chancellorsville*. Hermann R. Muelder and David M. Delo's *Years of This Land* was geographical history, while William R. Van Dersal's *The American Land* was a history of agriculture. Matthew Page Andrews rather pretentiously titled his story of the founding of Virginia *The Soul of a Nation*. Merle Curti's *The Growth of American Thought* was cultural history with an isolationist slant. Wilfred E. Binkley studied *American Political Parties: Their Natural History* with scientific detachment. Gustavus Myers thoroughly but dully gave *The History of Bigotry in the United States*. The Rivers of America appeared again in Dale L. Morgan's *The Humboldt* and Branch Cabell and A. J. Hanna's *The St. Johns: a Parade of Diversities*, the latter very lively. Walter S. Hayward and Dorothy Adams Hamilton's *The American People* was racy and sketchy. In *History of the English-Speaking Peoples* R. B. Mowat and Preston Slosson treated the British Isles, America, and the dominions as one community. Leland D. Baldwin's *The Story of the Americas* gave the history of the hemisphere in one volume.

J. B. Brebner and Allan Nevins told of *The Making of Modern Britain* for the benefit of Americans. B. H. Sumner's *A Short History of Russia* went backward from the present. S. Harrison Thompson described *Czechoslovakia in European History*. J. M. Thompson wrote *The French Revolution*. Edward Kennard Rand's *The Building of Eternal Rome* was a history of ideas from the Republic to the Renaissance. Paul Winkler's *The Thousand Year Conspiracy* was a history of Prussianism. The Department of State published two volumes of documents on *The Paris Peace Conference*.

Sidney Hook, in *The Hero in History*, insisted on the hero's share in the creation of events. Joseph R. Strayer edited *The Interpretation of History*, to show how it has been made.

Poetry. T. S. Eliot's *Four Quartets* showed him becoming much less formidable, but it was not apparent why the four poems should be called quartets. Less than complete intelligibility, though that fashion was certainly passing, could also be found in Dylan Thomas' *New Poems*, which never-

theless burned with strange fires. Stephen Vincent Benét, in *Western Star*, never to be finished, projected an epic of America's western development. A first book that attracted much attention was Margaret Walker's *For My People*, about Negroes. James Pipes' *Ziba* was nine poems about Negroes also, mainly narrative, lively and admirable. Leonard Bacon's *Day of Fire* and Norman Rosten's *The Fourth Decade* were directly about the war, as was *Here and Now*, by Ettore Rella, an army sergeant. The soldier was grimmer and more pessimistic than the civilians. John Masefield and Edward Seago collected British poems of the war in *A Generation Risen*. Mr. Masefield also published *Wonderings*, about his own childhood. John Holmes' *Map of My Country* was also autobiographical. Kenneth Patchen's *Cloth of the Tempest* was lively free verse. Walter Benton was erotic in *This Is My Beloved*. Robert Farren, in *This Man Was Ireland*, wrote a long narrative of early Christian Ireland. Hortense Flexner's *North Window* was pessimistic. Amanda Benjamin Hall described rural beauties in *Unweave a Rainbow*. Conrad Aiken's *Brownstone Eclogues* were in his by now familiar manner. *Across the Boards*, by David Cornel De Jong, was not easy reading. George Barker's *Sacred and Secular Elegies* included some of the year's religious poetry. Kenneth Fearing's *Afternoon of a Pawnbroker* was up-to-date, quite completely "New York." *The Dark Rain Falling*, by Gilbert Maxwell; *No Boundary*, by Lenore G. Marshall; *The Violent*, by Harry Brown, also deserved mention. T. S. Eliot made *A Choice of Kipling's Verse*, with a notable essay, and Oscar Williams edited an anthology, *New Poems 1943*.

See *Bibliography* under the various topics; LIBRARY PROGRESS; NEGROES; PULITZER PRIZES. Compare MAGAZINES, NEWSPAPERS, articles on foreign literature. For French publications in America, see FRENCH LITERATURE.

BENFIELD PRESSEY.

LITHUANIA. A former Baltic republic, which proclaimed its independence from Russia on Feb. 16, 1918, and was reannexed by the Soviet Union Aug. 3, 1940, as a constituent republic. In June-July, 1941, it was occupied by German forces. Kaunas was the provisional capital of Lithuania prior to Aug. 15, 1940, when Vilna was proclaimed capital of the Lithuanian Soviet Republic.

Area and Population. Including the Vilna territory acquired from the Soviet Union Oct. 10, 1939, and excluding Memel Territory (q.v.), ceded to Germany Mar. 22, 1939, Lithuania had an area of 22,964 square miles and an estimated population of 2,879,070 on Dec. 31, 1939. The newly annexed Vilna territory comprised 2,570 square miles with 457,500 inhabitants. According to a German-controlled Baltic newspaper, further rectifications in Lithuania's border in the Vilna sector were made in April, 1942, adding three districts with a population of 200,000. Estimated populations of the chief cities on Jan. 1, 1939, were: Vilna (Vilnius), 208,900; Kaunas, 152,365; Šiauliai (Shavli), 31,299; Panevėžys (Poneviej), 26,508.

Education and Religion. About 15 per cent of the adult population was illiterate in 1939. Roman Catholics formed 80.5 per cent of the population at the 1923 census; Protestants, 9.5; Jews, 7.3; Greek Orthodox, 2.5.

Production, etc. About 77 per cent of the population in 1939 was engaged in agriculture and 10 per cent in commerce, industry, and transportation. Forests, mostly pine, covered 2,645,000 acres. In-

dustrial establishments (1938) numbered 1,441, with 40,818 employees and an output valued at 480,000,000 lits. Previous to the Russian annexation, Lithuania had 1,680 miles of railway line, 20,272 miles of roads and highways, and about 1,600 miles of waterways; its only port was lost with the cession of Memel to Germany. For production, trade, and financial statistics prior to the Russian annexation, see 1942 YEAR BOOK.

Government. The democratic system established by the Constitution of Aug. 6, 1922, collapsed on Dec. 17, 1926, when the conservative Nationalist Union party established a single-party dictatorship, headed by President Antanas Smetona. He was re-elected by a board of electors Dec. 11, 1932, and Nov. 14, 1938. The Nationalist Union adopted fascism as its ruling principle Dec. 16, 1933. A new Constitution promulgated Feb. 12, 1938, was drawn up by a parliament (*Seimas*) chosen entirely from members of the Nationalist Union. It vested wide executive powers in a President, elected by parliament for seven years, and his Council of Ministers. Members of parliament were elected for five years from a one-party list by universal, secret suffrage. Representatives of two outlawed opposition parties, the Christian Democrats and Agrarian Socialists, gained representation in the new cabinet formed by Premier Antanas Merkys (Nationalist Union) on Nov. 21, 1939, as a result of the crisis precipitated by the conclusion of the Soviet-Lithuanian mutual assistance pact of Oct. 10, 1939 (see YEAR BOOK, 1939, p. 443).

This pact authorized the establishment of Soviet military and air bases in Lithuania, but safeguarded the republic's independence and social-economic system. However, on June 15, 1940, Soviet troops occupied the remainder of the country, and established a pro-Soviet government. Controlled elections, held July 14-15, produced a pro-Communist parliament, which on July 21 unanimously adopted a resolution for union with the U.S.S.R. Its petition was accepted by the Supreme Soviet in Moscow August 3, when Lithuania became the 14th constituent republic of the Soviet Union.

Coincident with the German attack upon Russia, Lithuanian patriots seized control in Kaunas and established an independent Government (June 23, 1941). This was dissolved by the Germans August 6 and the country was made a district in the newly-created Ostland Province of the Reich, with Dr. Adrian von Renteln as General Commissar for Lithuania. Under the administrative system legalized by the Reich Minister for Occupied Territories in the East on Mar. 18, 1942, the General Commissar appoints German District Commissars with full control over the districts into which Lithuania is subdivided. He also appointed a puppet administration (General Council) of seven pro-German Lithuanians to assist in governing the country. Head of the General Council, Gen. Petras Kubiliūnas, former chief of the Lithuanian General Staff. For 1943 developments, see below.

History. The political and economic situation in the three German-occupied Baltic States of Estonia, Latvia, and Lithuania continued during 1943 to develop along the same lines as in 1942 (see 1943 YEAR BOOK, p. 383-4). When the tide of the war turned against the German armies in Russia early in 1943, German authorities in the Baltic States demanded that the General Councils of the three states assist in the recruitment of Estonia, Latvia, and Lithuania legions to fight the Soviet Union. Moreover the Germans on February 18 decreed the restoration of private property rights to those participating in the struggle against Russia or notably

assisting the German war effort in the economic field. General mobilization of men of military age was decreed February 27, according to a Berlin report. Men reporting at mobilization centers reportedly were given the choice between volunteering for military service and conscription for labor service.

The General Councils balked at endorsing the recruiting drives unless granted a greater degree of national independence. In Lithuania the German General Commissar declined to bargain and appealed over the heads of the Councillors to the Roman Catholic Archbishop of Kaunas and to a special conference of Lithuanian leaders held April 5 for their support. They likewise rejected the demand. Out of 93 persons attending the April 5 conference, 90 signed a manifesto protesting at both Russian and German oppression and demanding immediate independence. Only a few hundred volunteers responded to direct German appeals for recruits. Many men fled to the forests to avoid labor or military conscription. There were pro-independence demonstrations and strikes and acts of sabotage.

This defiance brought the German Gestapo chief, Heinrich Himmler, to Lithuania during the spring. The General Council was dissolved. Four of its members were jailed. Some 40 peasant leaders were executed for failing to fill their agricultural quotas. An ensuing outbreak of guerrilla warfare was met by further reprisals, directed particularly against students, professors, and the intellectual classes. The Universities of Kaunas and Vilna were said to have been closed and libraries and scientific laboratories wrecked or burned. The systematic economic looting of the three Baltic States was continued to a point where the inhabitants faced hunger and severe hardship.

As the Russians pressed nearer to the Baltic States' frontiers, there were numerous reports during the latter months of 1943 that the Germans were preparing to evacuate the entire region. Inhabitants of some frontier districts were forcibly evacuated. Homeless Germans and Balts who had been settled in the Baltic States after the German occupation were repatriated to the Reich along with industrial equipment.

According to reports from the Baltic States, the guerrillas and underground organizations fighting the Germans were divided into pro-Soviet and anti-Soviet factions. The latter regarded the prospect of a second Russian occupation with growing apprehension as indications pointed to the reincorporation of the three republics in the Soviet Union without effective opposition by Russia's western Allies. See GREAT BRITAIN and UNION OF SOVIET SOCIALIST REPUBLICS under *History*.

LITTLE STEEL FORMULA. See LABOR CONDITIONS; NATIONAL WAR LABOR BOARD; UNITED STATES under *Inflation* and *Labor*.

LIVESTOCK. A discussion of general conditions appears in the articles on AGRICULTURE and FOOD INDUSTRY. Livestock statistics for the United States, to the extent that 1943 figures are available, are given below. (For fuller information, covering 1942, see 1943 YEAR BOOK, p. 225-7.) It was estimated that over-all meat production in 1943 would total 23,000,000,000 lb., a figure exceeding even the record production of the preceding year.

The number of cattle in the United States on Jan. 1, 1943, was 78,170,000 head, valued at \$69.66 each, representing a total value of \$4,140,256,000.

The number of hogs, Jan. 1, 1943, was estimated

at 73,660,000 head, valued at \$22.54 each and representing a total value of \$1,660,652,030. The number of pigs raised in 1943 was estimated at 121,847,000. The support price for hogs was raised to \$13.75 for good and choice grade butcher hogs of 200-300 lb.

The number of sheep on farms as of Jan. 1, 1943, was 55,089,000, a decrease from the previous year, but values rose to \$9.68 per head, representing a total of \$533,327,000. The lamb crop of 1943 was estimated at 31,101,000, and the slaughter of sheep and lambs during the year approximated 27,000,000 head. Consumption of apparel wool in the first ten months of 1943 amounted to about 918,000,000 lb.

The estimated number of chickens as of Jan. 1, 1943, was 540,107,000, the value per chicken at \$1.037 and the total value of \$560,095,000. Production of eggs was placed at 4,949,000,000 dozen, a figure which exceeded the year's goal by 169,000,000 dozen. The 1944 egg goal is 2 per cent higher than 1943 production. The farm flocks at the start of 1943 included 65 per cent pullets and 35 per cent hens. In November, 1943, about 24,000,000 chicks were hatched by commercial hatcheries, a 7 per cent decrease from the figure a year earlier; however, the January-November total showed a 20 per cent increase over the same period in the previous year. The average price paid by farmers per 100 chicks was \$13.00, an increase of \$1.68 cents. The number of turkeys on farms, Jan. 1, 1943, was 6,668,000 valued at \$4.45 per head. Statistics on dressed weight produced in 1943 for both chickens and turkeys are not yet available.

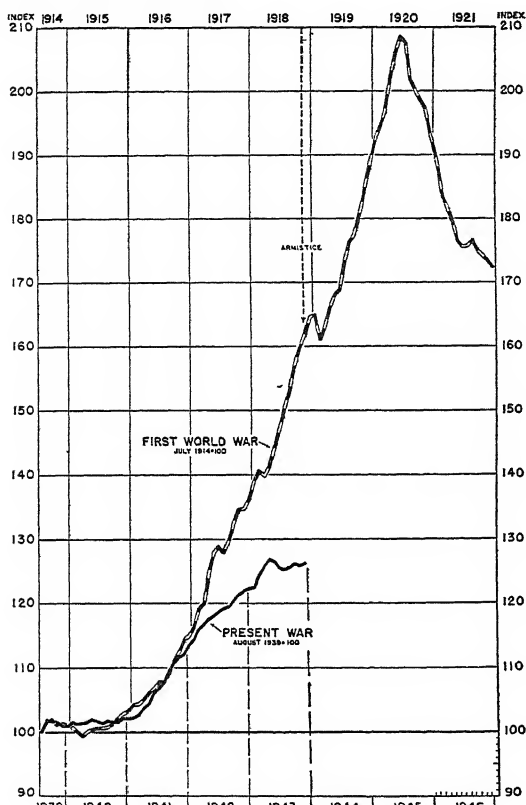
The number of horses continued to decrease, from 9,907,000 in 1942 to 9,678,000 on Jan. 1, 1943, the average value on the latter date being \$79.97. The number of mules was 3,712,000.

See HIDES, LEATHER, AND SHOES; INSECT PESTS; foreign countries under *Production*.

LIVING COSTS AND STANDARDS. After two years of war, the plane of living of American families in 1943 was substantially above that of most countries in peacetime. The level of national production throughout the year was extraordinarily high and the gross national product totalled almost 187 billion dollars, as compared with less than 152 billions in 1942 and 97 billions in 1940. The rapid transition from a peacetime to a full war economy in this country caused production of some civilian goods to be curtailed but, contrary to popular expectations, did not radically disrupt civilian life. The relative slowness of change in civilian consumption habits was more remarkable because such a large proportion (45 per cent) of the value of gross national product was devoted to the war machine.

Some changes in the everyday living of the civilian were inevitable. Many workers in war production centers were living in trailers, in temporary houses and barracks, or in crowded boarding houses. Frequently their housing conditions were far below those they enjoyed in prewar days. Husbands often were working on war jobs away from home, and were separated from their families. Women, who had never worked in factories before were helping to produce war tools in 1943, and some of these new workers retained the responsibilities of taking care of home and children as well. With gasoline rationing, pleasure driving became chiefly a remembered luxury. Clothing standards were simplified, shoes were rationed, the quality of many lines of every day apparel deteriorated, silk and nylon and higher quality cotton fabrics

were reserved for use of the armed forces, and there were limited supplies of children's clothing (particularly cotton underwear and nightwear). Transportation difficulties and the European campaign sharply reduced the fuel oil available to consumers in Eastern States and families became accustomed to a temperature of 60° instead of 70°-75°. All service industries were beset by the manpower shortage. Laundries and dry cleaning establishments curtailed their services, restaurants were universally short-handed, and domestic servants were often impossible to obtain. Total food supplies were adequate to fulfill the nation's needs but inevitable shortages of some articles shifted food consumption habits. Butter was scarce and oleomargarine appeared on the dinner tables of many families, and the nation as a whole ate less meat and more cereal products.



COST OF LIVING—WORLD WAR I AND II

Average for large cities beginning July, 1914 (top) and August, 1939 (bottom).

Manufacture of most consumer durable goods had largely ceased by 1943. (See WAR PRODUCTION BOARD.) In February, 1942, production of automobiles for civilian use was halted and during 1942 factories producing other consumer durable goods were rapidly converted to war purposes. Unusually large inventories in the hands of retailers at the beginning of 1942 cushioned the effect of the contracted production and civilians were able to purchase new refrigerators, washing machines, vacuum cleaners, and radios many months after manufacture had completely ceased. The small inconveniences experienced by housewives unable to obtain new mechanical equipment and the many small gadgets and utensils commonly used in prewar

homes were accepted as an inevitable result of the war situation.

Despite the heavy drain on supplies of clothing and other semi-durable goods which resulted from military and Lend-Lease needs, widespread shortages occurred in relatively few types of commodities. Curtailment of wool imports restricted the production of all wool garments and blankets during the first half of the year. Clothing manufacturers were encouraged to use blended fabrics, and wool content of blankets was limited to 80 per cent. Easing of the shipping situation in the last half of 1943, however, was followed by a relaxation of these limitations. All-wool suits, coats, and blankets were again available to moderate-income families in the fall of 1943.

Changes in food consumption habits were especially striking in 1943, the first full year of food rationing in the United States. Rationing of sugar and coffee in 1942 preceded the rationing of meats, butter, fats and oils, and canned fruits and vegetables in the spring of 1943. According to estimates of the Department of Agriculture per capita civilian consumption of all food in the United States was 2 per cent less in 1943 than in 1942. This small decline is due in part to the food supplied by the United States for our own armed services and those of our allies, and in part to shipments to our allies and to countries liberated from Axis occupation. About 25 per cent of our total food production was withheld from the domestic civilian markets in 1943 as compared to 14 per cent in 1942 and 6 per cent in 1941. Unfavorable crop weather in 1943 caused a 9 per cent decline in total crops as compared with record yields in 1942, although farmers had planted the largest acreage in 11 years. (See also AGRICULTURE; FOOD INDUSTRY.)

Added transportation difficulties were also responsible in part for local, temporary shortages of some foodstuffs. (See RAILWAYS.) The flow of meat supplies, particularly beef, to retail markets was irregular during the year and many families increased their consumption of fish and poultry as meat shortages developed.

The impressive expansion in total economic activity in this country resulted in an increase of 23 per cent in total income of individuals in 1943. The amount of money available for consumer expenditures and savings after payment of individual income taxes was 14 per cent larger than in 1942 and 83 per cent larger than in 1939. During the same periods, consumer expenditures rose 10 per cent and 47 per cent respectively. It is clear that a large share of the rise in consumer expenditures was a result of higher retail prices of goods and services. Even with increased living costs and substantially higher personal taxes, Department of Commerce statistics show that net savings of individuals rose 25 per cent in 1943 and amounted to 24 per cent of total income payments to individuals. (See BUSINESS REVIEW; LABOR CONDITIONS under Wages; TAXATION.)

At the close of 1943 living costs of moderate-income families were little more than 3 per cent higher than in December, 1942. During the first five months of the year, the cost of living advanced rapidly, until in May the Bureau of Labor Statistics' index stood at its highest level since the beginning of World War II. Seasonal reductions in fresh fruit and vegetable prices and price "roll-backs" under the subsidy program resulted in a 1.4 per cent decrease in total living costs during the three summer months ending in August. Between August 15 and December 15 the cost of living index fluctuated within narrow limits, influenced primarily by sea-

sonal changes in food prices, increased clothing costs, and an advance in coal prices allowed by the Office of Price Administration to cover higher costs involved in the wage settlement of miners. At the close of the year, living costs of wage earners and lower-salaried workers were one half of 1 per cent below their peak in May, 1943, 5.6 per cent above September, 1942, and 23.4 per cent above January, 1941, base date of the Little Steel formula.

The 3.3 per cent rise in retail food prices between December, 1942, and December, 1943, was small compared to the advance of 17.3 per cent in the year 1942 and 16.2 per cent during 1941. The sharp rise in food prices in 1941 and 1942 primarily followed the unprecedented civilian and military demands and substantially higher prices for farm products. The Emergency Price Control Act of January, 1942, specifically limited the price controls which could be placed on agricultural commodities and therefore prices of most foods remained uncontrolled until the passage of the Economic Stabilization Act in October, 1942. The subsequent imposition of price controls combined with rationing of scarce foods and the OPA food subsidy program served to hold down the advance of retail food prices in 1943. (For price controls, see ECONOMIC STABILIZATION, OFFICE OF; PRICE ADMINISTRATION, OFFICE OF. For subsidy program, see UNITED STATES under *Inflation*.)

In general the rise in retail food costs in most large cities was confined to a narrower range of products than in the two previous war years. Prices of fresh fruits and vegetables, fresh fish, and eggs showed the largest advance over the year, ranging from 25 per cent for fish to 8 per cent for fresh eggs. Many other foods, such as cereal and bakery products, nonalcoholic beverages, fats, oils, sugar, and sweets changed very little in cost during 1943. Butter and most meats were actually less expensive at the end of the year than at the beginning, on the average declining 8 per cent and 2 per cent respectively largely as a result of the OPA subsidy program.

Retail clothing costs to American city families advanced 6.9 per cent during the year, compared to an increase of 9.7 per cent in 1942. By December, 1943, consumer clothing expenditures were 34.2 per cent above the prewar level. The rise in clothing prices was caused partly by increases in raw material costs and partly by the gradual disappearance of lower-priced merchandise. Mounting wages and farm incomes in conjunction with the growing scarcity of inexpensive apparel served to build up consumer demand for higher quality goods. The understandable desire of manufacturers to take advantage of the larger margin of profit often obtained by making higher priced articles was also a factor in eliminating lower-priced merchandise. Retail sales of apparel stores in the United States rose about 21 per cent in 1943, reflecting higher retail prices as well as the effect of the widespread "trading up." Price increases were most pronounced for articles of women's clothing. Percale wash frocks increased 23 per cent over the year, untrimmed sport coats 19 per cent, and rayon panties 5 per cent. In men's clothing, prices of suits and overcoats advanced 4 per cent and 5 per cent respectively and pajamas, cotton underwear, and business shirts up to 8 per cent.

The end of the year saw a lengthening list of clothing articles which were in short supply. Children's clothing and shoes, men's shorts and pajamas and work clothing, and women's rayon panties were difficult to obtain in many cities. The lack of definite quality standards in the clothing field pre-

cluded the possibility of full statistical measurement of the dollar value of quality decreases of individual items.

It was increasingly apparent in 1943 that the variety of styles and fabrics available to civilians was smaller than that to which most people had grown accustomed before the war. The War Production Board during 1942 and 1943 inaugurated simplification programs limiting the amount of yardage and the types of materials to be used in the manufacture of many clothing articles. War Production Board restrictions were tightened or relaxed as the supply picture changed during the year. Limitations on the use of wool, for example, were eased for the fall season as stock piles of wool were restored in this country. (See FASHION EVENTS.)

Cost of all housefurnishings to moderate-income city families rose 3.4 per cent over the year. Textile housefurnishings, subject to the same limitations in supply as was cotton clothing, were scarce in many large cities. Cotton curtains had disappeared from the shelves of many stores throughout the country. Sheets, which advanced 1 per cent in price over the year, were reported in short supply from time to time during 1943. (See TEXTILES.) Durable housefurnishings, on the other hand, were generally unavailable by the year's end and housewives had to do without new washing machines, vacuum cleaners, and electric refrigerators. In addition, replacements of broken parts of these household conveniences were often difficult to obtain. No new radios were manufactured for civilian use in 1943, and metallic kitchen utensils were largely replaced by plastic or glass substitutes. Severe curtailment of the use of steel for civilian equipment, plus the shortage of skilled labor and lumber, all contributed to lowering total furniture production in 1943, and particularly the lower grade articles. Total retail sales of housefurnishings decreased 11 per cent but an easing of military requirements toward the end of the year made possible a brighter outlook for increased production of durable consumer goods in 1944. The War Production Board announced that electric irons, and coil springs for upholstered furniture would be available in 1944. Washing machines and mechanical refrigerators may also be manufactured in limited quantities.

There was a one tenth of 1 per cent increase in average rental charges for homes in large cities. This small change demonstrates the effectiveness of the government rent control program. This increase does not include any rise which may have occurred in room rents. In addition, many war workers obtained jobs away from home and were unable to secure adequate living quarters for their families within commuting distance of the plant. Such workers often found their personal housing costs doubled because of the necessity of maintaining two residences.

In war production centers which mushroomed almost over night, the housing shortage is still acute despite the extensive defense housing program instituted by governmental authorities and private contractors (see NATIONAL HOUSING AGENCY). Many families are living in trailer camps and dwellings which fail to meet minimum standards required for health and decency. In some shipbuilding and other war centers, men are reported to be paying astronomical charges for beds which are rented out to three shifts a day. In the first six months of 1943, the National Housing Agency surveyed 35 war centers, and found that in half of them the proportion of habitable vacant dwelling units was less than 1 per cent of all dwelling units as compared with

the average vacancy rate in normal times of about 5 per cent.

By the end of 1943 the scope of OPA rent control had become virtually complete for urban areas and war production centers in the United States. In December, 1942, rent control extended to areas populated approximately by 70 million persons; a year later the areas under control included 87 million persons. Of the 34 large cities covered in the Bureau of Labor Statistics cost of living index, only Scranton, where rents had remained relatively stable, was exempt from rental control.

Wage earners and clerical workers found their fuel, electricity, and ice costs had increased 3 per cent during 1943. Coal prices rose during the first quarter of the year following the extension of the work week in the coal industry to six days with payment of overtime rates for the extra day. The settlement of the mine wage dispute in November caused a further advance in labor costs, and another advance in prices was allowed which brought the total rise in retail prices of coal over the year to 8 per cent. Fuel oil prices advanced 4 per cent over the year, reflecting increases granted by OPA to compensate distributors for added expenses resulting from the rationing program. These advances were partly counterbalanced by declines in average gas and electricity rates in scattered large cities of the country. (See COAL; GAS; ELECTRIC LIGHT; PETROLEUM, etc.)

The cost of miscellaneous goods and services to consumers rose 4.7 per cent in 1943. The sharpest increases occurred in personal services, most of which are exempt from OPA price control. Beauty and barber shop services, hospital charges, medical care, domestic and laundry services all showed appreciable advances in cost over the year. Prices for toiletries and drugs and public transportation rates on the other hand changed relatively little in 1943.

By and large, average American families experienced surprisingly few real hardships as a result of wartime conditions. In 1943 the goods essential for healthful living were present in adequate supply. Most Americans who have not contributed members of their families to the armed forces have as yet made few sacrifices in this war.

For living conditions abroad, see the countries under *History*.

FAITH M. WILLIAMS.

LOAD LIMITS. See STATE LEGISLATION under *Aviation, Highways, and Motor Vehicles*.

LOANS. See BANKS AND BANKING. For **Government Loans**, see AGRICULTURE. EXPORT-IMPORT BANK; LEND-LEASE; NATIONAL HOUSING AGENCY; RECONSTRUCTION FINANCE CORPORATION.

LOCKHEED C-69, P-38. See AERONAUTICS under *Types and American Transports*.

LOMBOK. See NETHERLANDS EAST INDIES under *Area and Population*.

LOS ANGELES. See RAPID TRANSIT; ROADS; SANITATION.

LOTTERIES. See FEDERAL BUREAU OF INVESTIGATION.

LOUISIAD E ISLANDS. See PAPUA.

LOUISIANA. A west south central State. Area: 48,523 sq. mi. Population: 2,363,880 (1940 census); 2,349,532 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS;

SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Sam Houston Jones (Dem.), inaugurated in May, 1940, for a four-year term; Lieutenant Governor, Marc M. Mouton; Secretary of State, James A. Gremillion; Attorney General, Eugene Stanley.

LOYALTY ISLANDS. See NEW CALEDONIA.

LÜBECK. See GERMANY under *Area and Population*.

LUCITE. See PLASTICS.

LUMBER. See BUILDING MATERIALS; also CHEMISTRY under *Wood*; INSECT PESTS; NATIONAL PARKS.

LUTHERAN CHURCH. The latest figures show that Lutherans in the United States and Canada have 5,116,807 baptized and 3,635,588 confirmed members in 15,909 organized congregations, with 13,332 ministers. In 1942 they raised \$51,819,089 for local congregational expenses and \$13,229,557 for the work of the church at large.

Activities related directly to war conditions in 1943 called forth campaigns for \$1,000,000 by the National Lutheran Council, representing eight Lutheran bodies, and for \$500,000 by the Missouri Synod. In the five months ending Oct. 1, 1943, both goals had been passed by 20 per cent with indication of continued generous response. These two agencies maintain 48 full-time and 71 part-time centers in camp communities for spiritual ministry to service men and women. The Council expanded its ministry in 20 defense industry areas, currently employing 9 pastors and 31 lay workers. It also continued its emergency maintenance of about 50 orphaned mission fields and was instrumental in getting some missionaries back to their posts despite travel difficulties.

Although various Lutheran bodies drew closer in cooperative work programs, the year 1942 did not see any official progress toward Lutheran union. But informal advance was made when theological professors representing 17 of the 21 Lutheran seminaries in the United States met for a week of study and discussion of doctrinal stands. Plans for another such conference in 1944 were laid. Two small Lutheran bodies, the United Danish Church and the Danish Church, appointed committees to study the question of union in the coming year.

Among special 1943 undertakings was the opening of mission work in Argentina by the Norwegian Lutheran Church of America in cooperation with the United Danish Church; three missionaries are soon to be sent out. This project fittingly climaxed the former body's celebration of the one hundredth anniversary of the first congregation organized in 1843 by Norwegian settlers in the United States and the ordination of the first American-Norwegian pastor. During the year the Augustana Synod, of Swedish-American origin, laid plans for a somewhat similar "faith with works" program, scheduled to culminate in 1948 in the centennial of the first Swedish Lutheran congregation in America.

The American Lutheran Church initiated an intensive campaign of personal evangelism in which its young people's league will give special attention to the fight against teen-age delinquency. Along the same line are the Child Evangelism Campaign

of the American Lutheran Publicity Bureau and the Christian Home Emphasis Program of the United Lutheran Church which stress the responsibilities of church schools and homes, both campaigns planned for 1943-44. See NORWAY.

LUXEMBOURG. A grand duchy of Western Europe, occupied by German troops on May 10, 1940, and formally annexed to the Reich Aug. 30, 1942. Bounded by Germany, France, and Belgium, Luxembourg has an area of 999 square miles and a population estimated at 301,000 on Dec. 31, 1939. About 98 per cent of the inhabitants profess the Roman Catholic faith. They speak a Germanic dialect, with French as their secondary language. Chief towns: Luxembourg (capital), 57,740 inhabitants; Esch-Alzette, chief mining center, 27,517; Differdange, 15,945; Dudelange, 13,572. There is no illiteracy.

Production, Trade, etc. Agriculture normally supports some 32 per cent of the population. Mining and metallurgical industries are important, production figures for 1939 (in metric tons) being: Pig iron and ferroalloys, 1,776,000; steel ingots and castings, 1,824,000; iron ore, 5,140,632 (1938). A Belgo-Luxembourg customs union, established May 1, 1922, ended Aug. 15, 1940, when Luxembourg was incorporated in the German customs area. In 1940 there were 2,558 miles of highway and 318 miles of railway line open to traffic.

Government. Previous to the German invasion, executive power and the right to organize the government rested with the Grand Duchess Charlotte, who succeeded to the throne on Jan. 9, 1919. Legislative power was vested jointly in the Grand Duchess and the Chamber of Deputies (lower chamber) of 55 members (comprising in 1940, 25 Catholic-Conservatives, 18 Socialists, 6 Radical-Liberals, and 6 others), elected for a term of six years by universal suffrage. The Council of State (upper house) of 15 members was appointed for life by the sovereign. On Aug. 29, 1939, Parliament unanimously voted full executive and legislative powers to the Grand Duchess and her Government for the duration of the impending European hostilities.

Upon the German invasion, Grand Duchess Charlotte and four of the five Cabinet members escaped to Paris. When France collapsed the Grand Duchess and Prime Minister Peter Dupong transferred the Government-in-Exile to Montreal, Canada (November, 1940). However the Ministers of Foreign Affairs (Joseph Bech) and of Labor and Social Welfare (Peter Krier) established offices in London. Both cities are official seats of the Government.

Reichsfuehrer Hitler on July 25, 1940, appointed Gustave Simon as Nazi Gauleiter, or Chief of Civil Administration, in Luxembourg. He undertook the progressive assimilation of Luxembourg in the German Reich (see preceding YEAR BOOKS). For 1943 developments, see below.

History. The German regime of oppression in Luxembourg, described in preceding YEAR BOOKS, became more onerous during 1943 according to members of the Government-in-Exile and underground reports emanating from the duchy. In January thousands of iron and steel workers were reported to have struck in protest against their long hours and the shipment of the mills' output to the Reich. Hundreds of strikers were said to have been arrested. Conscription of young men for military service in German forces provoked new disturbances. An official London statement of March 6 said a revolt of conscripts at the railway station just before their departure for Germany was quelled

with machine-gun fire. In September the German authorities ordered the registration of Luxembourg men of 50 to 59 inclusive for military service.

The Luxembourg Commissioner of Information estimated in March that over 30,000 of his countrymen, or 10 per cent of the population, had been shipped to German concentration camps or war factories. Food conditions were reported "very bad" in August. See BELGIUM under *History*; WORLD WAR.

LYNCHING. See NEGROES.

M-9 (Electric Fire Director). See PHYSICS; also, ELECTRICAL INDUSTRIES; MILITARY PROGRESS.

MACAO. A Portuguese colony at the mouth of the Canton River in South China. It consists of a peninsula on the island of Macao, and the nearby islands of Taipa and Colôane. Area, 6 square miles. Population (1940 census), 374,737, including 8,989 Portuguese. Macao, the capital, is a free port. Trade, mainly transit, is in the hands of the Chinese. Budget (1942): 46,798,761 escudos. Shipping (1938): 6,406 vessels (3,117,571 tons) cleared the port. Governor, Comm. Gabriel Teixeira.

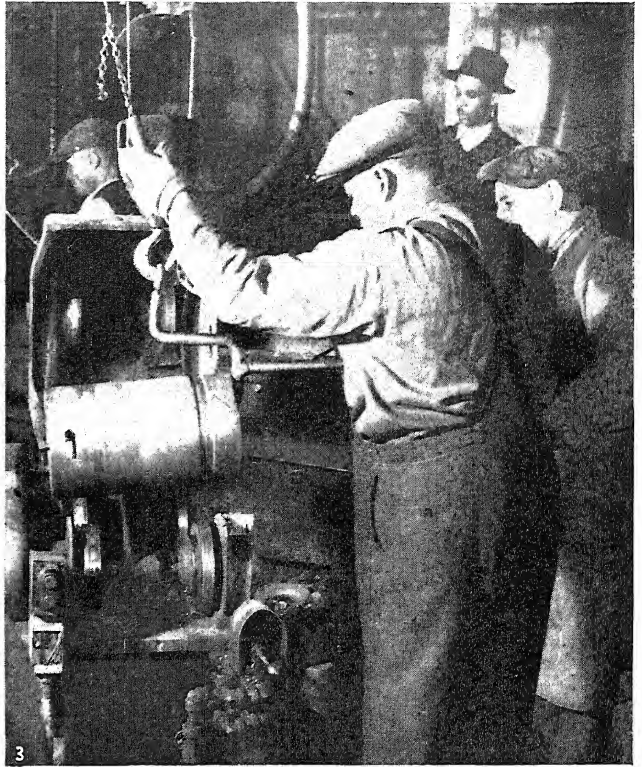
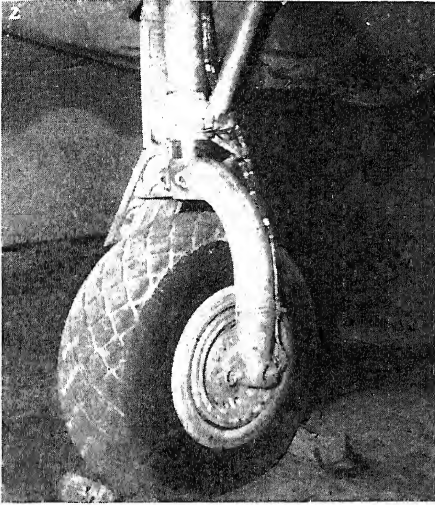
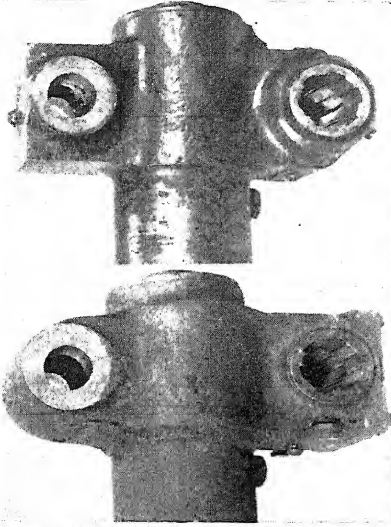
History. According to Chinese reports, Japanese troops aided by Chinese mercenaries committed a flagrant violation of Portuguese neutrality on Aug. 18, 1943, by forcibly commandeering the British river steamer *Sian* at Macao after killing more than 20 armed guards and policemen. See PORTUGAL under *History*.

MACEDONIA. See BULGARIA, GREECE, and YUGOSLAVIA.

MACHINE BUILDING. Numerous changes have taken place during 1943 in the methods used in manufacturing war material and machinery in general. While few of these have been startling they all show progress in the way of acceptances of practices and methods which were previously considered too radical. The demand for greater production of planes, tanks, and guns has made it necessary to accept newer methods than had been used previously. This does not mean that quality has been sacrificed to quantity but rather that former prejudices of both Army and Navy officials have been broken down to permit the use of newer methods.

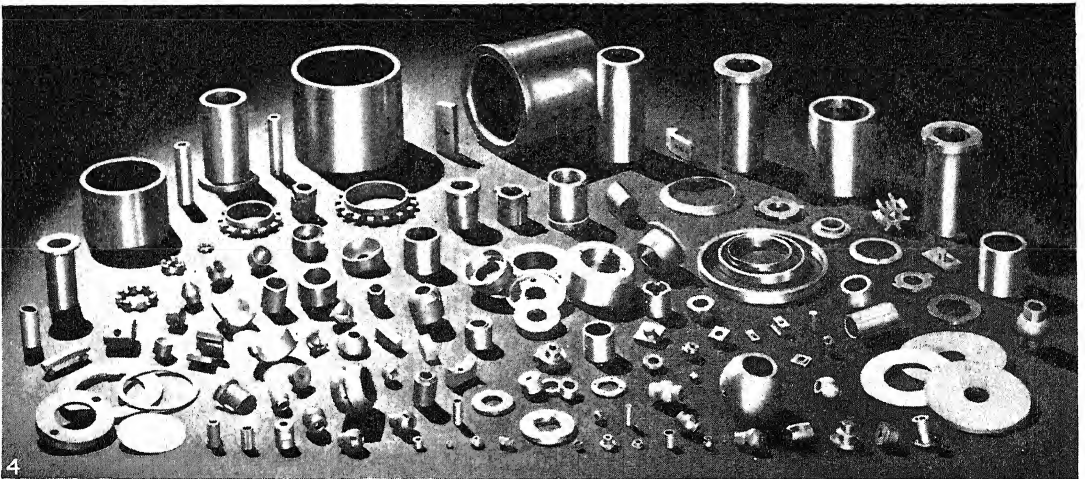
Three outstanding examples of this are the acceptance of welded structures in many places, the use of steel castings instead of forgings, and the use of new methods in producing the rifling grooves in barrels of the new, light automatic rifle which has been so effective in the hands of paratroopers and commandoes. Welding has proved perfectly satisfactory in the making of oleo struts for airplane landing gear, steel castings by the centrifugal process at Fords are being used for airplane engine cylinder barrels and landing gears, and the rifling is being done by both broaching and compression.

Although welded gun carriages were proved perfectly satisfactory at the Watertown Arsenal a number of years ago, other branches of the service refused to accept it and demanded forgings from which it was necessary to machine great quantities of valuable material. A notable instance of this was the oleo cylinder for landing gears for airplanes. These were formerly forged in very expensive dies and on very heavy steam hammers. Then from 70 to 80 per cent of the metal was machined away. All this was in order to have the lugs



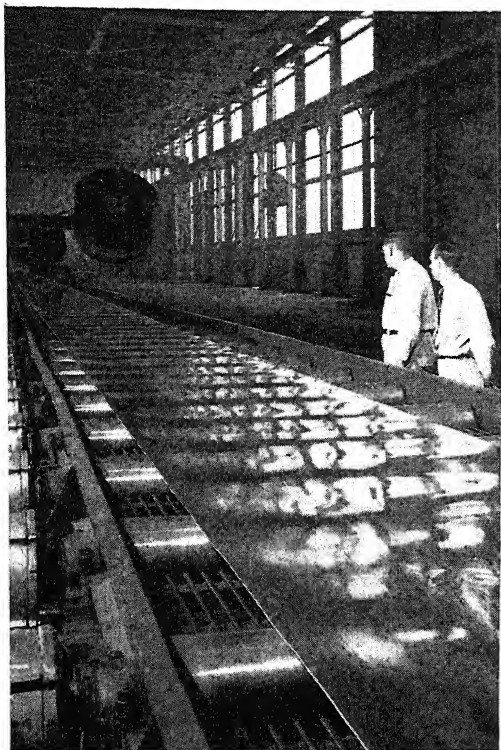
1. The acceptance of welded structures, exemplified in the axle for anti-aircraft gun mount. The top view shows the forged axle. The bottom view shows the axle redesigned for arc welded construction, which resulted in a saving of approximately \$68 per unit. (Photo courtesy The James F. Lincoln Arc Welding Foundation, Cleveland)

2-3. Use of steel castings instead of forgings, as adopted by the Ford Company for airplane engine cylinder barrels and landing gears. Above, the heated mold in which the engine barrel is cast is being lowered into a centrifugal casting machine. Left, landing gear of a B-24 bomber, centrifugally cast. (From Ford News Bureau)

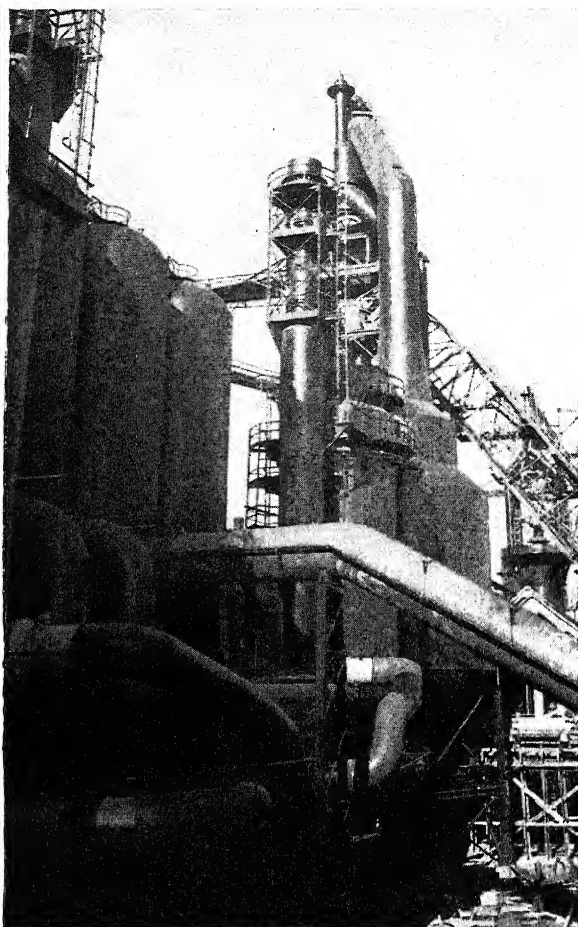


ACCEPTANCE OF NEW METHODS—SPEEDED BY URGENT MACHINERY NEEDS

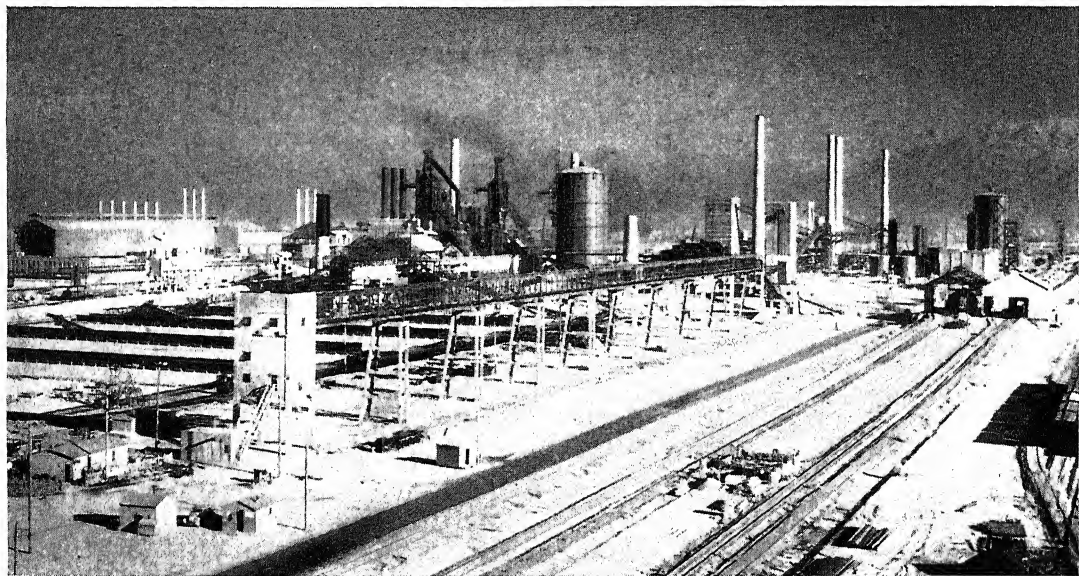
4. Some of many machine parts now being made from powdered metal. The powdered metal is compressed in molds to about one third of its original volume and then heat treated. These parts can be made to very accurate dimensions and save much machining work as well as waste material. (Courtesy American Machinist)



Above: Continuous rolling mill production of aluminum strip was an important factor in meeting the tremendous needs by the aircraft industry in 1943. Strip shown here is passing over a runout table at an Aluminum Company of America plant.



Right: One of three huge blast furnaces for pig iron production at the new Geneva Steel Works, Provo, Utah.



EXPANDING PRODUCTION OF CRUCIAL MINERALS AND METALS

Largest unit in the war time steel expansion program is Defense Plant Corporation's Geneva Steel Works near Provo, Utah, shown immediately above. This completely integrated \$180 million plant, built from the ground up, will be operated by Geneva Steel Company, United States Steel Corporation subsidiary, and will produce steel plates for the Pacific Coast shipbuilding industry. See the articles on various minerals and metals.

or ears for the connections an integral part of the cylinder. Now these lugs are welded on to a steel tube, the forging hammers can be used for other purposes, the metal is saved as well as the machine hours wasted by the previous method, and maintenance depots where planes are serviced report very favorably on the use of the welded structures.

Until comparatively recently, cylinders for high-power airplane engines have been made from steel forgings or from drawn tubing. Ford, however, is building his quota of Pratt & Whitney 2,000-h.p. engines with cylinders of centrifugal steel castings. Tests have proved these castings to be at least equally as satisfactory as the forgings and they save both time and material. Similar castings are also being used in the landing gear for the large Liberator bombers being built by the Ford Company. The use of castings and the welded structures previously referred to are likely to affect materially future designs and specifications, both of which have been affected by the fact that designing companies also owned drop forging plants.

Cyclewelding, which is really a cementing process that has been in the process of development for several years is being used to some extent in the assembly of minor airplane parts of sheet metal. Its use will probably be limited because it requires a close mating of parts and fixtures in which they can be firmly held while being heated for the joining process. Another and newer process is one by which glass and metals or plastics can be joined by a plating method that is not at all common as yet. This joining can also be made pliable.

As a result of the war demand the output of aluminum and magnesium has increased so greatly that plans for building planes of plastic wood have been abandoned in this country even though the British Mosquito bomber, a wooden plane, has been very successful. The increased supply of these light metals are leading to their more extensive use after the war, although they will meet competition from the plastic bonded wood in many cases. The stability of the plastic bonded woods is usually greater than of the molded plastics and seem more likely to be used for such parts as automobile body doors on that account.

Forgings of both aluminum and magnesium are likely to find a place in machine construction to an even greater extent after the war. It has been found that these metals require different treatment in forging. While aluminum can be readily forged under the hammer the magnesium gives better results when forged by steady pressure as in the forging machines, or squeeze presses. It is quite probable that forgings of these metals will replace castings in some machine constructions.

Metallurgy is also playing an important part in the war effort. Aside from the lighter alloys we have the so-called "N E" steels, the letters standing for National Emergency. Some of these have largely taken the place of many of the older steels requiring alloys which are now difficult to obtain. It is quite probable that some, at least, of these new steels will find a permanent place in industry as we learn how to heat-treat them so as to secure the best results. While there are a few complaints regarding the service obtained from these new steels, there are doubtless many places where they will prove very satisfactory substitutes for the more expensive alloys.

Many machine parts are now being made by compressing powdered metal into molds which give it accurate form and which compress it to about one-third of its original volume. The molded material is then heat treated at a temperature below

the melting point which fuses the particles into a solid mass. Further heat treatment gives it the characteristics desired and the piece is ready for use without machining in most cases. These parts can be made to very accurate dimensions and are saving much machining work as well as much waste material. This method began with the making of bronze bearing shells some years ago and is being developed so as to handle many different metals and in constantly increasing sizes. Further development may greatly reduce the amount of machine work in many parts which now require special and intricate machine operations.

Glass is being substituted for high grade steel in the making of ring and plug gages for inspecting parts being machined. The use of glass has proved most satisfactory for both plug and ring gages used in the inspection of parts for small arms and for various munitions. Glass is less affected by temperature than steel, wears longer, and has several other advantages. Breakage would seem to be a handicap but it has been found of small moment. Glass has the advantage of retaining its size better than steel in case of its being dropped; unless it breaks the gage retains its original size. Steel, on the other hand, may be distorted from a fall and go unnoticed unless carefully checked.

All of these changes in manufacturing methods have a direct bearing on the building of machine tools and machines for other purposes. The substitution of steel tubing for forgings in the hydraulic landing gear of airplanes reduces the number of drilling and boring machines necessary for the work. The same is true when centrifugal castings can be used.

Development of powdered metal manufacturing will also greatly reduce the number of machines required for making such parts as can be molded instead of machined. Should plastic wood replace sheet metal in automobile bodies it will merely change the tools and fixtures used but will not materially alter the total number required. The same is true in the substitution of glass for gages and other tools so far as the making of the tools themselves is concerned. The difference will be in the making of the raw materials used.

The developments in airplane construction should make for lower costs if quantities can be maintained to warrant the use of the methods which have replaced the hand work of prewar days. Even now there is more hand work than would be necessary if frequent changes were not made necessary to secure ever increasing efficiency in combat. In peace times the improvements could be spread over a longer period.

Many developments will not and cannot be turned to normal channels until after the war. But they are, in most cases, capable of adaptation to peacetime products and should greatly increase the quality of our postwar products.

See the article which follows; articles on minerals and metals; also, CHEMISTRY; ELECTRICAL INDUSTRIES; MOTOR VEHICLES; SHIPBUILDING; REFRIGERATION, etc.

FRED H. COLVIN.

MACHINERY INDUSTRY. Urgent military ordering of new war-plant equipment, replacement demand arising from the heavy wear and tear on existing productive facilities, and substantial lend-lease requirements, were prime factors in raising the output and shipments of industrial machinery to all-time record levels during the past year. The value of all industrial machinery produced in 1943 probably exceeded \$5,000,000,000, compared with the

\$1,500,000,000 prewar annual rate of output. To fill its huge volume of war orders, the industry, which includes manufacturers of such diversified lines as metal-working tools, power-generating machinery, and construction and mining equipment, employed a force of 1,250,000 wage earners, contrasted with a normal peacetime staff of less than 300,000 workers, and expanded productive facilities rapidly.

Peak demand for industrial machinery was reached by mid-year, at which time the war construction program had been rushed to virtual completion, and such key industries as iron and steel and mining had been serviced. Machinery shipments, which had averaged some 290 per cent of 1939 deliveries in 1942, and 340 per cent in the 1942 fourth quarter, advanced to 346 during the first quarter of 1943 and to 356 in the second quarter. Shipments in the third quarter moved up slightly to 359 and tapered off in the final three months of the year. Despite the high level of activity, manufacturers' inventories were held under firm control through most of the year, with some effort in the later months to work down stocks.

In performing their vital war tasks with spectacular success, machinery makers achieved notable progress in overcoming obstacles which had hampered operations in the previous year. Problems arising from shifts in designs and in military specifications were taken in stride. Scarcities of raw materials were greatly alleviated under the smoother functioning of the Controlled Materials Plan, and the flow of critical component parts was expedited. Manpower shortages on the other hand became acute in some labor areas, and the skill of applicants declined. While the major difficulties of 1942 and early 1943 had been identified largely with the challenge of attaining an adequate production volume to meet military needs, developments later in the year focused attention on problems of a different nature.

With original equipment requirements of munitions and ordnance works largely satisfied by late summer, with lend-lease deliveries past their maximum, and with cutbacks in some war schedules, new ordering of industrial machinery dropped sharply, and manufacturers turned increasingly to the output of direct war items to supplement normal-line sales. Subcontracting activity in the production of various war weapons and other equipment, including parts for bombs, torpedoes, submarines, and airplanes, proved of some benefit in bolstering shipments. The industry was assured, in addition, continued large-scale ordering of certain products which are expendable in the war effort. Makers of such civilian-line equipment as textile, food processing, printing, and paper mill machinery, whose output had been curtailed severely early in the war, and who as subcontractors on war contracts had felt the impact of cutbacks in the fall of 1943, were hopeful that they might soon be permitted to restore their facilities to a larger nonmilitary production. Because of numerous bottlenecks, however, reconversion of important machinery plant capacities to civilian production was not believed a near-term prospect.

The disposition of used equipment and machinery loomed as a dominant problem for industrial machinery makers before the end of 1943 had been reached. The Redistribution Division of the War Production Board turned its attention to ways and means for liquidating a growing inventory of used machinery, owned for the most part by Federal Agencies. Of total used machinery stocks, dealers late in 1943 held an estimated \$200,000,-

000 worth, the Defense Plant Corporation about \$90,000,000, Treasury Procurement \$120,000,000, while the Army-owned items aggregated possibly \$1,000,000,000 in value. With the bulk of used machinery supplies still in the future, when war plants would be dismantled, the government already was taking measures to move the accumulating surpluses. Listings of second-hand equipment were circularized throughout the country but war contractors manifested little interest. Efforts were made to develop the market for idle equipment in South America, and it was expected that the rehabilitation of war-torn industries in Europe might provide another outlet. The Smaller War Plants Corporation considered plans for purchase of surplus machinery and subsequent leasing to small manufacturers with option to buy.

Machine Tools. Problems of excess plant capacities and used equipment inventories became particularly pressing during 1943 in the vital machine tool division of the industrial machinery industry. Makers of such types of tools as lathes, grinding, drilling, and milling machines, planers, and threading, boring, and broaching machines, expanded facilities rapidly, and saw sales, stimulated by the war "tooling up" demand, soar from the prewar level of \$200,000,000 per year to \$1,320,000,000 in 1942, representing an expansion in unit output from the 1930-39 annual average of 25,000 units to 270,000 units. While total shipments of machine tool plants in 1943 aggregated around \$1,100,000,000, or only 17 per cent below the record 1942 showing, monthly sales declined steadily throughout the year. Such sales, which had reached \$883,000,000 in the 1942 fourth quarter, declined to \$357,000,000 in the first quarter of 1943, and to \$341,000,000, \$271,000,000 and \$215,000,000 in the succeeding quarters of last year. New ordering fell to \$30,000,000 monthly by the end of the year, and backlogs had been reduced to around \$210,000,000 or approximately seven months' business. The War Production Board's pool ordering program was discontinued in mid-year; of pool orders placed since February, 1941, and aggregating \$1,864,000,000 in value, only some \$50,000,000 remained on manufacturers' books at the 1943 year-end.

Manufacturers of such standard machine tools as millers, planers, lathes, and other general purpose equipment were first to be affected by the slump in new ordering, while builders of specialized, single-purpose tools were able to maintain sales with greater success. The backbone of demand came from the airplane industry and from lend-lease, with Russian shipments a leading factor. The decline in total ordering was accelerated by the cutback program in war plant construction and machine tool output of the War Production Board, launched in May. In its program, the War Production Board directed that new purchases of machine tools, machinery, or equipment, would be authorized only when it had been conclusively proved that the work could not be done with existing facilities. By mid-year, 100 machine tool companies out of 377 reporting to the War Production Board had been given releases to engage in other work. Converted tool makers turned to the production of such items as valves, heat exchangers, motors, airplane assemblies, Diesel engine parts, turbines, instruments, and hydraulic equipment for warplanes and ships. The shift away from machine tools remained a relatively slow process, however, and by late fall a War Production Board survey showed that 83 per cent of the industry's capacity was still devoted to tools, 9 per cent to direct war

orders, and the remaining 8 per cent was idle. Over 53 per cent of the reporting companies had no direct war work at all, and it was believed that by early 1944 over two-thirds of the industry's capacity would be available for work other than machine tool output. Despite declining shipments of tools, however, the number installed in manufacturing plants throughout the nation had risen to around 1,500,000 units by the end of 1943; of this total almost half, or 700,000 units, had been added since 1939, about 65 per cent being owned by the government. According to the National Machine Tool Builders' Association, the depreciated value of tools in use stood at \$3,890,000,000 at the beginning of 1944, compared with a prewar value of some \$900,000,000. Machine tools in the government stockpile, estimated at a 10 years' normal supply, were reported to be twice as efficient as tools installed in industry prior to 1940, and promise to rapidly become a significant supply factor, since about 90 per cent of some 220 types made can be adjusted to peacetime production with little difficulty.

A congressional committee was urged in December by Charles E. Wilson, president of General Motors, to authorize production of machine tools for civilian goods output. Restrictions on the use of essential material for nonwar work, and manpower shortages, were seen as the chief obstacles toward immediate utilization of large idle capacities for this purpose. Meanwhile, the War Department prepared a questionnaire at the year-end designed to arrange for the disposal of surplus tools. Contractors were to be asked to list the quantities of tools they might be interested in buying when machine tools are declared to be surplus. Controls were tightened over idle tools by establishing a mandatory reporting system for all unused items, to the end that the flow of available materials to existing facilities could be expedited. Future contracts then would be placed with greater knowledge of available machine tool capacity, and the voluntary transfer of idle tools to companies in need of them might likewise be encouraged.

Power Generating Machinery. By contrast with the machine tool makers, producers of power-generating machinery enjoyed a further marked sales gain during 1943, in meeting the enormously expanded needs of the shipbuilding industry for motors, turbines, and other generating apparatus. As compared with 8,089,000 dead-weight tons of merchant shipping delivered from yards in 1942, shipbuilders' deliveries last year approximated 19,000,000 tons. In addition to the huge tonnage of cargo vessels, deliveries of warships to the Navy climbed rapidly. Demand for steam generating equipment from the utilities, normally the major factor in this machinery field, was not an important influence last year, however. Construction expenditures of electric utilities for production plant, which amounted to \$228,000,000 in 1942, dropped down to \$153,000,000 in the 1943 budget. Nevertheless, sales of steam engines and boilers, turbines, heaters, and internal combustion engines during 1943 undoubtedly exceeded the prewar volume of \$150,000,000 per year many times over. Demand for Diesel engines, both from industry and shipbuilding, was particularly impressive. Thus, Diesel engine sales in 1943 probably attained the 25,000,000 horsepower level, contrasted with an output of 4,600,000 h.p. in 1941 and of 2,700,000 h.p. in the 1939 period. Multiple-engine installations gained more favor in marine use, while applications in the railway equipment field widened and Diesel-driven tractors continued to win approval in agriculture.

See ELECTRIC LIGHT AND POWER; SHIPBUILDING.

Construction Machinery. Construction activity in 1943 fell to about two-thirds of 1942's volume, as the war program terminated and civilian building remained negligible, but manufacturers of heavy machinery usually employed in this industry found a substantial market for tractors, bulldozers, and excavating units in the military field. Toward the end of the year, war demand constituted almost the entire sales volume. Mining activity, on the other hand, was sustained at peak levels through most of 1943, and sales of mining tools were maintained well above prewar performance. Expansion of oil refinery capacities found reflection in good demand for pumps, but restricted drilling held down sales of some oil field equipment makers. (See CONSTRUCTION INDUSTRY.)

Other Machinery. Producers of machinery required in industries such as textiles, paper mills, commercial laundries, printing, leather workers, and food processing, of course, were required to convert their facilities early in the war to military production. These companies engaged in extensive subcontracting on various projects and late in 1943 began to suffer from the cutback program. A return to civilian output was not allowed as the year closed, and the main hope of industrial machinery manufacturers in such lines was that they could possess sufficient flexibility to switch rapidly to new phases of the war effort.

See BUSINESS REVIEW; articles on materials, as IRON AND STEEL and VANADIUM; WAR PRODUCTION BOARD under Conservation. Compare MACHINE BUILDING.

H. E. LUEDICKE.

MACHINE-SHOP MIST. See HEATING AND VENTILATING.

MACKENZIE, District of. See NORTHWEST TERRITORIES.

MADAGASCAR. A French island colony near the southeast coast of Africa. Area, 241,094 square miles including 790 square miles in the Comoro Islands (Mayotte, Anjouan, Grande Comore, and Moheli). Population, 3,797,936 at the 1936 census (Comoro Islands, 128,608), comprising 3,758,338 Malagasy, 25,255 French, and 14,343 foreigners. Total estimated population in 1940, 3,900,000. The natives are of Malay-Melanesian origin, with the Malay type predominating in the interior and an admixture of Arab, East Indian, and Negro races along the coast. Chief towns (1936 census): Tananarive, the capital, 126,515; Majunga, 23,684; Tamatave, 21,421; Antsirabe, 18,215; Tulear, 15,180; Fianarantsoa, 14,740.

Production. The inhabitants are mainly engaged in stock-raising and agriculture. Chief products, with latest available output in metric tons: Corn, 100,000 in 1938-39; rice, 440,000 in 1938-39; potatoes, 86,000 in 1937-38; coffee, 30,000 in 1940-41; cane sugar, 12,000 in 1940-41; tobacco, 6,300 in 1938-39; copra, 2,000 (net exports), in 1938; groundnuts, 8,200 in 1937-38; manioc (exports), 35,534 in 1938; tapioca (exports), 8,989 in 1938; sisal (exports), 2,467 in 1938; graphite (exports), 13,433 in 1938. Other leading export products were gold, 435 kilograms in 1939; vanilla, 74,858,000 francs in 1938; clove oil and other essential oils, 8,300,000 lb. in 1938; cloves, over 10,000,000 lb. in 1938. The principal industries are engaged in processing sugar cane, rice, cloves, etc., for export or local consumption.

Foreign Trade. Imports in 1940 totaled 363,758,903 francs (641,278,246 in 1939); exports, 616,-

501,638 (756,097,807 in 1939). About three-fourths of the prewar trade was with France. Coffee, vanilla, canned meats, and hides, in the order named, were the leading exports.

Finance. The revised 1943 budget for Madagascar and its dependent islands balanced at 495,644,000 francs (about \$11,368,000 at the 1943 exchange rate of 43.6 francs to the U.S. dollar). The public debt on Jan. 1, 1939, totaled 823,866,684 francs (chiefly for public works).

Transportation. Tamatave, Majunga, Diego Suarez, Tulear and Fort Dauphin are the leading ports. Vessels entering all ports in 1938 numbered 7,364 of 4,306,309 tons. The Pangalanes Canal, a natural channel sheltered by reefs, connects most of the towns of the east coast. Railways extend 534 miles. A network of good roads, built for the most part since 1930, extended 15,756 miles in 1941. Air services established in 1943 connected Tananarive with French Somaliland and with French colonies in West and North Africa.

Government. The island is administered by a French Governor General. He is assisted by administrative and advisory councils, the different ethnic groups being represented on the latter body. Following Marshal Pétain's capitulation to Germany on June 22, 1940, the French authorities in Madagascar adhered to the Vichy Government. British forces invaded and occupied the whole of Madagascar during 1942 (see 1943 YEAR BOOK, p. 391) to forestall a threatened Japanese landing. After concluding an armistice with the Vichy authorities Nov. 5, 1942, the British occupational authorities in January, 1943, turned over the civil administration to Gen. Paul Louis Legentilhomme, who was named Governor General by Gen. Charles de Gaulle's French National Committee Dec. 14, 1942. After the creation of the French Committee of National Liberation at Algiers early in June, 1943, General Legentilhomme was succeeded as Governor General by M. Le Mart. A British garrison remained on the island.

History. It was announced in London May 5 that the French National Committee had concluded agreements with the U.S. and British Governments for the sale of Madagascar's surplus raw materials and essential foodstuffs through Anglo-American governmental agencies. Less essential commodities were made available for purchase through normal trade channels.

MADEIRA. An administrative district of Portugal, consisting of a group of islands (Madeira, Porto Santo, and three uninhabited isles) in the Atlantic about 600 miles southwest of Lisbon. Area, 314 square miles. Population (1940 census), 249,771. Capital, Funchal (on Madeira). Normally Funchal was an important port of call for shipping lines and pleasure cruises, but as a result of the war the tourist trade came to an end. In 1942 some 187 vessels docked at Funchal as against 1,316 in 1938. Hand embroidery and wine making are important occupations. The wine output in 1942 was estimated at 2,113,360 U.S. gallons; exports totaled 244,557 U.S. gallons. Sugar, bananas, and other fruits are grown. See PORTUGAL.

MADOERA. See NETHERLANDS EAST INDIES under *Area and Population*.

MAGAZINES. The first year of war brought about few changes in the magazine industry, but by 1943 wartime conditions began to have important effects. Reader interest as evidenced by mounting circulations was at an all-time high. The news-

stands absorbed almost as many copies of their product as could be supplied. Advertising, too, shot upward, and for the first time in the history of the business, magazines were forced to adopt some form of restriction on the amount of advertising they could accept. This publisher's utopia was marred only by the fact that the government restricted the amount of paper which could be used by magazines to 90 per cent by weight of their 1942 usage. But in spite of this, circulation zoomed higher than 1942 figures.

Almost all magazines shared in the boom. The war-inspired emphasis on technical knowledge increased the circulation of trade magazines, especially those in the field of aviation, radio, and mechanics. The news and opinion magazines were in even greater demand to fill the need for interpretation and analysis of war news not otherwise supplied by the newspapers and the radio. The general magazines, offering a combination of entertainment, interpretation, and solutions to new problems, found an ever-increasing audience among people who never before were interested or could afford to buy. The rise in purchasing power of the public and the effective distribution methods of the magazines served to bring product and market together advantageously. Changes in mode of travel from auto to train gave people greater opportunities for reading. Forced to stay at home because of travel restrictions, they read more. This, coupled with the fact that millions of men now in the Army and Navy discovered reading as a form of recreation and education, and read voraciously everything from comics to high-brow literary journals, gave impetus to the boom in magazines.

Top circulation position among the monthlies was still held by *The Reader's Digest* with approximately 8,000,000 in the United States edition. The *Ladies' Home Journal*, with almost four million and a quarter, was the next highest, and was first among all magazines carrying advertising. Among the weeklies, *Life* reached the amazing total of 3,600,000 copies per week. Almost all other magazines were at their all-time highs. Even the so-called quality magazines such as *Harper's* and the *Atlantic Monthly*, reached far above their usual 100,000. The comic magazines, too, attained new highs, with an estimated readership of 20,000,000, not only among children, but with a large proportion of readers among civilian adults and service men.

Advertising volume for all magazines reached an estimated total of \$220,000,000 in 1943, an increase of \$50,000,000 over 1942, and the biggest volume in magazine history. For the twelve months of 1943 there was an increase in advertising of 28.5 per cent over the similar period in 1942. Not all magazines showed this general average. The largest gain was made by *Newsweek*, whose advertising during the first nine months of 1943 showed an increase of 80.1 per cent. All the other large general magazines showed increases, but not in such sensational proportions. Even *Liberty*, long in the doldrums, showed a 20 per cent gain in lineage over 1943, and under the direction of its new publisher, Paul Hunter, will probably show a profit. Generally, the paper shortage had the effect of increasing advertising content and decreasing editorial content of magazines. A survey of 21 leading magazines made by the Publishers' Information Bureau showed that 16 magazines ran fewer editorial pages during the first nine months of 1943 than they did during the same period in 1942.

In spite of the fact that many war-expanded American industries were eager to place large amounts of advertising, mainly of the institutional type, many magazines were obliged to ration advertising space. As early as last April *Mademoiselle* began to turn away new advertisers. Between April and the end of the year they rejected almost 400 pages in advertising, 100 pages for the August issue alone.

There have been many changes in the mechanical make-up of magazines to bring them within the limits of paper restrictions, and to avoid the necessity of cutting subscriptions to 90 per cent of 1942 totals. Margins became narrower, the columns wider, the type smaller, and (most widespread) much lighter paper was used for cover and text.

Some publishers of group magazines dropped less profitable publications to bolster paper quantity on their more popular ones. This practice was more general among pulps, generally run in groups, which could easily shift or combine publications.

The changes in editorial content during 1943 were not so drastic as in other aspects of magazine publishing. A minimum of so-called experimental material was used. There was an increase in most of the national magazines in the number of articles related to current events the world over, and a decrease in the amount of fiction of the "escape" or mere entertainment variety. Irrespective of war conditions, there has been a tendency on the part of magazines during the past few years to use more and more nonfiction. Articles and stories were shorter, not only because the readers prefer shorter lengths, but also because it is possible with shorter pieces to include the same number of pieces in fewer pages. Serials were eliminated from a number of magazines and the use of novelettes complete in one issue became more widespread. In the general magazines, the editorial material dealing with the war received the greatest emphasis. This covered the widest possible range, from eyewitness accounts by regular war correspondents to articles about problems on the home front such as rationing and production. Fiction, too, had to take the war into account. No longer could the hero of a story appear in civilian clothes without explanation. The activities of all characters, women included, could not ignore the war background.

The government suggested to some extent the subjects for fiction and nonfiction alike. The Magazine Bureau of the Domestic Branch of the Office of War Information worked closely with the magazines in this country making suggestions as to ideas they wished emphasized to help the war effort. The Bureau kept magazines informed each month of the latest war developments through the issuance of the *Magazine War Guide*, which lists war-related topics likely to be of public interest three months from date of issue. Writers prepare and submit articles and stories on the suggested subjects to magazine editors through the regular channels—either direct or through literary agents. Magazines carried almost four thousand articles, editorials, stories, and other features suggested by the *Magazine War Guide* during the period from September, 1942, to November, 1943.

The government for the first time became a magazine publisher, despite considerable opposition from some quarters. The Overseas Branch of the Office of War Information published during the year 1943 two magazines for overseas distribution, *USA* and *Victory*. In these magazines they have embodied the two most important aspects of the American magazine—the digest and pic-

tures. *USA* is a digest magazine with 75 per cent text and 25 per cent pictures; and *Victory* is a picture magazine with 75 per cent pictures and 25 per cent text. Circulation figures for these magazines are constantly changing, but as of Dec. 1, 1943, *USA* distributed 540,000 copies for all areas, and *Victory* 535,000 copies for all areas. *USA* is published in eight languages: English, French, Spanish, Portuguese, Italian, Arabic, Greek, and Norwegian. *Victory* is published in seven languages: English, French, Italian, Spanish, Portuguese, Arabic, and Afrikaans. Both are distributed in all neutral and Allied countries except Sweden and China, and in occupied countries where possible. They are not distributed to American civilian or military personnel overseas. Where it is advisable to do so, arrangements are made with local dealers to sell the magazines. *Victory* accepts advertising.

Aside from these two government publications for the foreign countries, the magazine industry in this country expanded tremendously in the field of foreign editions. *Time* established printing operations in Honolulu, Australia, Persia, Mexico, and Colombia, and is planning others in Sweden and Turkey. The magazine is the same as that published in this country, but the printing is actually done in these foreign countries for mechanical expediency. Prior to the past year, *Time* had two overseas editions, one known as the Air Express Edition, which was printed in this country and flown throughout Latin America, and the other published in miniature size for distribution in Great Britain.

The *Reader's Digest* also increased its foreign language editions starting two new ones during 1943: *Det Basta är Reader's Digest*, published in Swedish, was begun in March, 1943, and has a current circulation of 300,000. *Al Mukhtar*, published in Arabic in Cairo, was first issued in September, 1943, and now has about 150,000. Their other two foreign language editions, published in Spanish and in Portuguese for distribution in Latin America, now have a combined circulation of over a million and a quarter copies. Unlike the United States edition, all of these foreign language editions accept advertising.

Foreign language editions of United States magazines were not the only representatives of the magazine industry overseas. At the suggestion of the Special Services Division of the Army Service Forces, over a score of magazines began supplying magazine reading to American military personnel overseas with the publication of so-called "pony" editions. These midget editions (modeled on the overseas edition of *Time* started in 1942 for British readers) measure six by nine inches and are about one-quarter their usual size. They are printed only for issue by the Army Special Services Division and for resale by the Army Exchange Service. They contain no advertising. Magazines published in the "pony" edition include *Coronet*, *Infantry Journal*, *Inside Detective*, *Life*, *Time*, *Modern Screen*, *Newsweek*, *New Yorker*, *Omnibook*, *Science News Letter*, *Sporting News*, *Esquire*, three Ziff-Davis publications, *Flying*, *Radio News*, and *Popular Photography*, and a number of others. Although not strictly a "pony," *Life's* overseas edition is printed regular size but on especially light paper. It is expected that twenty-five others will soon be added to the list. *Omnibook* alone is furnishing 50,000 copies a month in this edition, and liked its smaller size so much that in April the magazine changed its domestic edition to the pocket-size.

Time runs several hundred thousand copies in the pony size. These magazines are an excellent morale-builder for the men in the armed forces, since they offer service men abroad a definite tie with their home life.

Because of the paper shortage, the War Production Board frowned upon starting new magazines in 1943, but in spite of this, over twenty new magazines appeared. The cases of some of these new magazines will be reviewed by the War Production Board, but in the meantime, they are still being published. These include *Everybody's Digest*, *Prefabricated Houses*, *Plastics World*, *Plastic and Resin Industry*, *St. Nicholas* (since suspended), *War Plant Worker*, *Home Garden*, *Flying Cadets*, *Tune In*, *Predictions*, *Aviation News*, *Air Transport*, *Army Exchange Reporter*, *Palisades*, *World at War*, *Living Poetry*, *Finish*, *Woman's Reporter*, *Read*.

There have been a number of magazine suspensions during the year, mostly among the "little" or experimental type of publication. Magazines such as *Bow*, *Crucible*, *Alentour*, etc., are no longer published. *Golfing*, the largest casualty, was suspended for the duration early in 1943.

Joseph N. Few, oil magnate and owner of the *Farm Journal*, purchased the *Pathfinder* from Emil Hurja. Graham Patterson, publisher of the *Farm Journal* became publisher of the *Pathfinder* as well. Patterson instituted several changes in this 50-year old weekly, which preceded even the *Literary Digest* as a news weekly. The plans call for an improved format and cover similar to the large news magazines; nationwide correspondents to supply the magazine with original material, instead of its former dependence upon rewritten material from the newspapers and press services; a foreign staff which will seek to personalize the war news from the small-town point of view; general advertising instead of the patent medicine and mail order copy that was formerly used. The publishers do not intend to change the homespun quality of the editorial material.

In September, *Esquire* was accused by the Post Office Department of publishing matter of a lewd and obscene character, and was ordered to show cause why it should not have its second-class mailing privileges suspended. Hearings were held in Washington for three weeks, the defense including such well-knowns as H. L. Mencken, Channing Pollock, Louis J. Croteau, executive director of the New England Watch and Ward Society, Raymond Gram Swing, and several psychiatrists from large universities. But even with this imposing roster of witnesses pleading its cause, the suspension of *Esquire's* second-class mailing privileges was ordered by Postmaster General Frank C. Walker, effective Feb. 28, 1944, contrary to the two-to-one vote in favor of *Esquire* by the board of postal officials. Curiously enough, in spite of the fact that the original charge was that *Esquire* printed material of an obscene nature, the action revoking the second-class mailing privilege was taken on the grounds that the magazine fails to meet the requirements of being "originated and published for the dissemination of information of a public character, or devoted to literature, the sciences, arts, or some special industry." Enforcement of this order would increase *Esquire's* mailing costs by an estimated \$500,000 annually. At the year's end, *Esquire* was seeking a court injunction to set aside this suspension.

Shortly after her retirement as editor of *This Week*, Mrs. William ("Missy") Meloney, legendary figure in magazine publishing, as well as in

many other fields, died. (See NECROLOGY.) She was editor of *This Week* since it was launched eight years ago. William I. Nichols, former managing editor of *This Week*, succeeded her as editor. After several changes of editors, Edward Maher became editor of *Liberty*, replacing Jerome Ellison.

Argosy, the famous old pulp magazine in which O. Henry and Jack London appeared, was made into a slick paper, all-fiction magazine. It now features modern and historic adventure stories, tales with engineering and industrial backgrounds, sports, mystery, and love stories.

Time was prominent in magazine publishing news. It began a new "Canada At War" Department in its Canadian edition, which is designed to picture for Canadians the part of the Dominion in the war. Also, it was prominent among the publications banned by Argentina for stories which were considered unfavorable to the revolutionary government there. Printing operations on the West Coast were begun, and *Time* is the first and only national magazine with printing operations west of Chicago. Here they plan to run off 100,000 copies primarily for California distribution.

In December, 1943, the War Production Board announced a further cut in the amount of paper to be used by magazines in 1944. This order limits magazines to 75 per cent by weight of the total amount used in 1942. Also, magazines using 100 tons or less per year, previously exempted from reductions, were brought down to 90 per cent of their 1942 usage, and only those using 5 tons or less in any calendar quarter will be allowed to use in 1944 the full amount of their 1942 tonnage.

How magazines will meet this new cut can be inferred from the action taken late in 1943 by a number of magazines which began to ration subscriptions. *Cosmopolitan*, *Good Housekeeping*, *Harper's Bazaar*, *House Beautiful*, *Motor Boating*, *Town and Country*, *Chemical Abstracts*, *Chemical and Engineering Chemistry*, *Journal of the American Chemical Society*, *Electrical Manufacturing*, and *Western Short Stories* will accept only renewal subscriptions and no new subscriptions. The *Saturday Evening Post* and the *Ladies' Home Journal* will accept only subscriptions for two or more years. The McGraw-Hill Publishing Company, publishers of 26 trade journals including *Business Week*, *Aviation*, *American Machinist*, etc., will accept only the number of subscriptions equal to those which are not renewed.

The number of copies of magazines supplied to newsstands had to be reduced in order to allow many magazines to fill their subscription orders, and further reduction will undoubtedly be necessary. More magazines will be forced to curtail the amount of advertising they can accept. Experiments with still lighter weight paper may be a partial solution, but it is apparent that for the first time in the history of magazines in America the demand will exceed the supply. Though not an official government order, rationing of magazines on an informal basis by the publishers will undoubtedly be put into effect.

See FRENCH LITERATURE, etc.

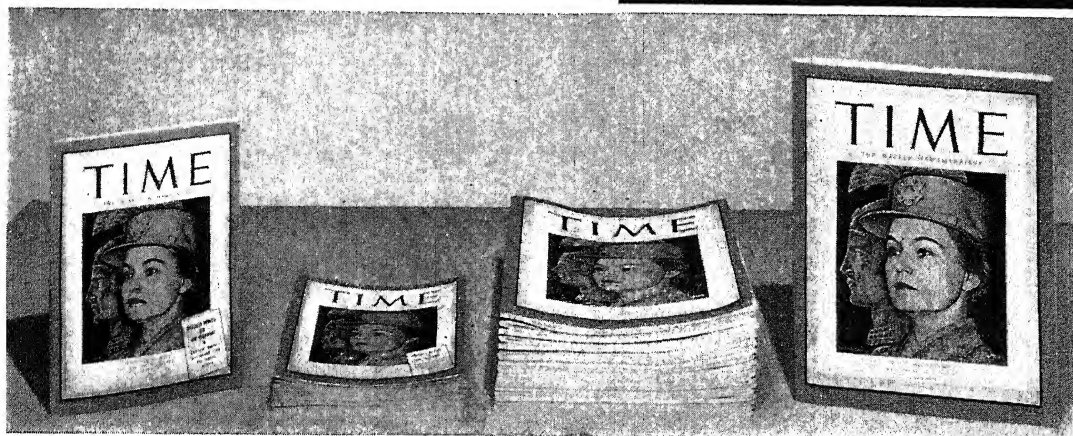
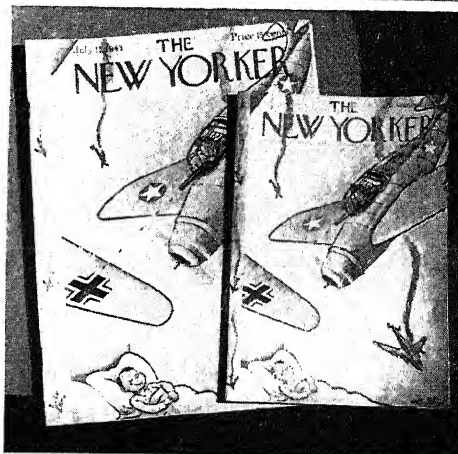
A. S. BURACK.

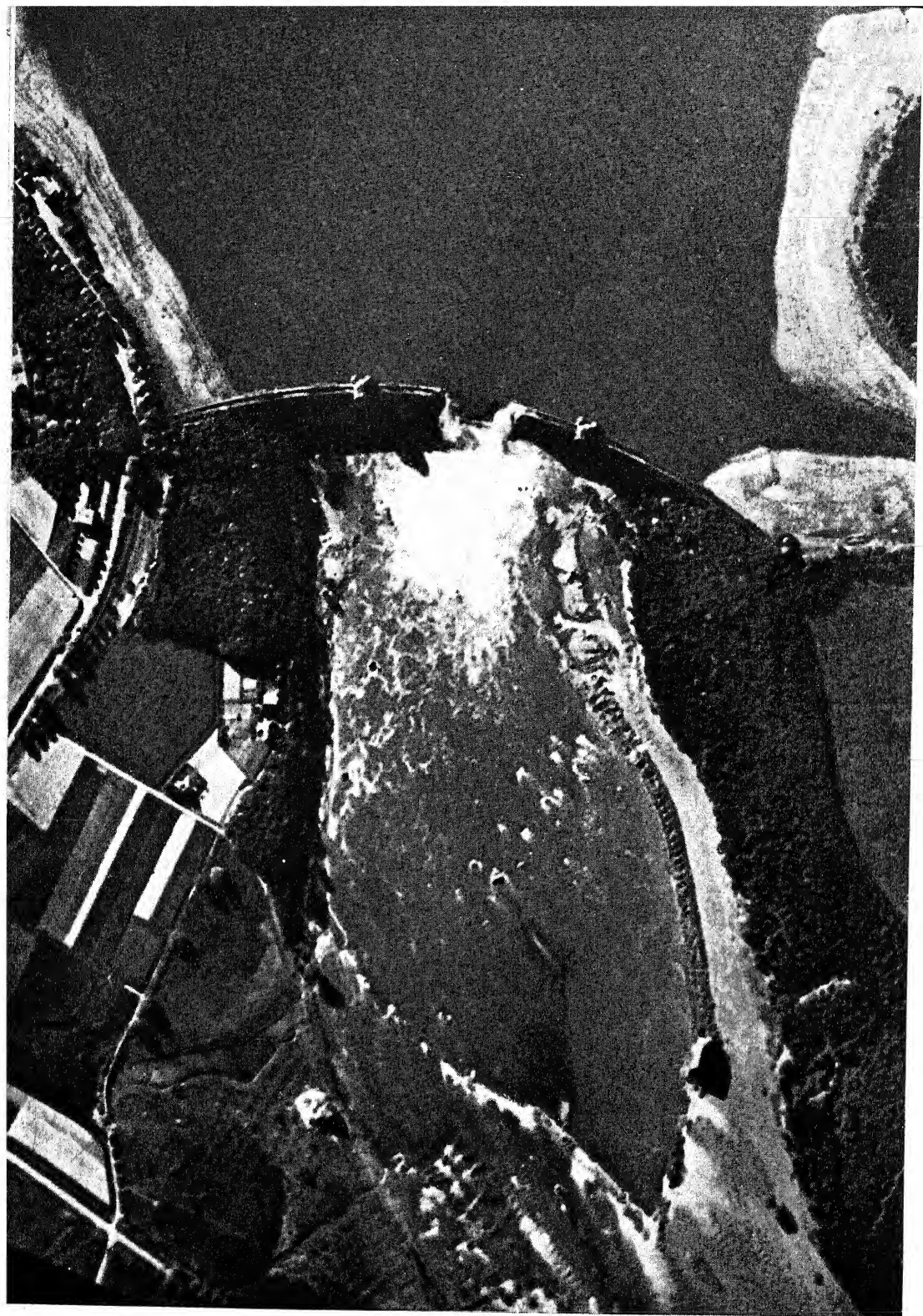
MAGNESIUM. Magnesium came off the shortage list in 1943 as expanded production facilities swung into operation although the originally anticipated peak annual production of 700 million lb. was not realized. According to the U.S. Bureau of Mines, the 1943 production was about 330,000,000 lb. (94,840,000 lb. in 1942).



SHUTTLING NEWS ACROSS THE SEAS

Above: A group of magazines on military subjects. Right and below: Midget or "pony" editions designed for overseas shipment to service men. Over a score of magazines are now being supplied with full contents in lightweight format to American military personnel, and it is expected that a number of others will be added to the list. Here shown are *The New Yorker* (photo by Tide) and *Time* (courtesy the publishers) in both regular and miniature size.





EMPLOYMENT OF AIR POWER AGAINST ENEMY SUPPLY

An air view showing the 200-foot breach in the Moehne Dam, after the R.A.F.'s historic attack of May 17 in the Ruhr area. The photograph shows the lake already drained of much of its contents. The foam visible below the bridge covers the space where the power station was situated. (British official Photo)

Although by no means as relatively abundant as aluminum, its light metal twin, production for the year met all essential war and civilian requirements and even contributed to a small stockpile. The last unit of the sprawling Basic Magnesium plant at Las Vegas, Nev., whose management was assumed by Anaconda Copper in the fall of 1942, went into production on July 12, 1943. The output of the \$130-million plant, with annual capacity of 102 million lb. was sufficient to take magnesium out of the critical class. The Permanente Metals plant near San Francisco, under the management of Henry J. Kaiser, overcame earlier technical difficulties to achieve maximum production.

On the other hand, the big government-owned reduction plant at Spokane, Wash., operated by Electro-Metallurgical Co., was handicapped seriously by labor shortages making it problematical whether full production could be achieved even in 1944. Two smaller plants also operated at far less than capacity.

Those who had expected magnesium to assume greater importance in aircraft construction as compared with aluminum during the year were disappointed. No all-magnesium airplane fuselage appeared, and both Germany and the United States used the metal in about the same way and in the same relative amounts in the manufacture of aircraft. The Germans, however, introduced large streamlined forgings of magnesium alloy for the mounts of in-line engines. Ready acceptance of the metal caused by its light weight (one-third lighter than aluminum; four-fifths lighter than copper), the favorable strength-weight relationship of its alloys and its ready workability was offset by greater prominence given in discussions to such disadvantages as high co-efficient of expansion, susceptibility to stress corrosion, and high cost.

Widespread speculation as to the postwar importance of the three principal production processes—electrolytic, carbothermal, and ferrosilicon—revolved around production costs. The ferrosilicon process, upon which the government has based much of its emergency expansion program because of its relative simplicity and minimum requirements of power and critical materials, was shown to be relatively expensive by figures released by the Canadian government. The Dominion Magnesium Co., Ltd., Haley's Station, Ontario, the first large plant to use the Canadian-developed ferrosilicon process, produced the metal at an average cost of 39.7 cents per lb. during March, 1943, although this figure undoubtedly was later reduced. This compares to a ceiling price of 20.50 cents per lb. for 99.8 per cent pure ingots.

Like aluminum, magnesium has a tremendous wartime importance for aircraft manufacture, but in addition has a demand practically as large for the manufacture of incendiary bombs. (See BOMBS.) Magnesium production facilities in the United States are 94 per cent government owned.

See CHEMISTRY; ELECTRICAL INDUSTRIES; MACHINE BUILDING.

CHARLES T. POST.

MAHE. See FRENCH INDIA.

MAILS. See POST OFFICE; also, AERONAUTICS under *Domestic Air Carriers*; CENSORSHIP, OFFICE OF; TAXATION (for postal rates).

MAINE. A New England State. Area: 33,215 sq. mi. Population: 847,226 (1940 census); 791,388 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to

each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Sumner Sewall (Rep.), inaugurated in January, 1943, for his second two-year term; Secretary of State, Harold I. Goss; Attorney General, Frank I. Cowan.

For governmental changes, see STATE LEGISLATION under *State Government and Employees*.

MAINTENANCE OF MEMBERSHIP CLAUSE. See NATIONAL WAR LABOR BOARD.

MAKIN. See GILBERT AND ELLICE ISLANDS; WORLD WAR under *The War in the Pacific*.

MALACCA. See BRITISH MALAYA.

MALARIA. See MEDICINE; PUBLIC HEALTH SERVICE.

MALAY STATES. See BRITISH MALAYA.

MALTA. A British colony in the Mediterranean, comprising the island of Malta (95 sq. mi.), Gozo (28 sq. mi.), and Comino (1 sq. mi.). Civil population (Jan. 1, 1940), 270,000. Capital, Valletta, 22,779 inhabitants in 1931. Vital statistics (1939): 8,930 births and 5,385 deaths. Education (1938-39): 168 schools and 34,846 students enrolled. Malta is a fortified naval base.

Production and Trade. Barley, wheat, potatoes, maize, oranges, figs, honey, grapes, and cotton are the main products. Livestock (1939): 34,470 goats, 15,936 sheep, 6,707 swine, 4,540 cattle, and 8,799 horses, donkeys, and mules. Trade (1939): imports £4,167,465; exports £659,812 (including reexports of £433,756). Shipping (1939): 2,359 vessels aggregating 4,077,526 tons entered the port of Valletta. Roads (1940): 521 miles.

Government. For the year ending Mar. 31, 1942, the deficit was estimated at £662,000. Malta is governed according to Letters Patent of Feb. 14, 1939, promulgated on Feb. 26, 1939, which granted a new constitution under which there is a council of government of 20 members (5 ex-officio, 3 official, 2 unofficial nominated by the Governor, and 10 elected) presided over by the Governor who has a casting but no original vote. English and Maltese are the official languages of Malta. Governor and Commander in Chief, Field Marshal Viscount Gort (appointed May 27, 1942).

History. Allied victories in the Mediterranean area during the first half of 1943 ended the long and terrible siege of Malta (see 1943 YEAR BOOK, p. 393) and inaugurated a period of reconstruction. According to a statement by the British Colonial Secretary, the toll of Axis air raids on Malta up to the end of June, 1943, was 1,436 civilians killed, 3,415 wounded, and 7,000 buildings destroyed or damaged. The £10,000,000 voted by the British Parliament in November, 1942, for the reconstruction of the island and payment of private property damages was made available in February, 1943. Shipments of vitamin concentrates sent by the American Red Cross reached the island in March. King George VI visited Malta on June 20 during his tour of the Mediterranean and received a warm welcome from the populace. He elevated the Gov-

ernor, Viscount Gort, to the rank of field marshal.

Meanwhile the island had been transformed into an important offensive base for RAF operations. It played a leading role in cutting the supply lines of Axis troops in Tunisia and in the Allied invasion of Sicily and the Italian mainland. General Eisenhower and his staff used Malta as operational headquarters during the attack on Sicily (see *WORLD WAR*). On July 7 the British Colonial Secretary announced in the House of Commons that the Government planned "to restore to Malta a system of responsible government after the war." Meanwhile the state of siege declared when Italy entered the war remained in effect. In August some 17,000 dock workers in Valletta went on strike for six days until the Governor agreed to increase subsidies for certain rationed goods and raised the minimum weekly wage to about \$12.

MANADO. See *NETHERLANDS EAST INDIES. MANAGEMENT-LABOR COMMITTEE.* See *WMC.*

MANCHUKUO. An empire in northeastern Asia established under Japanese protection Mar. 1, 1932; comprising the former Chinese provinces of Fengtien, Kirin, and Heilungkiang in Manchuria, and Jehol and the six northern counties of Chahar in Inner Mongolia. Capital, Hsinking (formerly Changchun). Ruler, Emperor Kangtê, who was enthroned Mar. 1, 1934.

Area and Population. Including the South Manchuria Railway Zone under direct Japanese jurisdiction but excluding Kwantung (q.v.), the area of Manchukuo is estimated by Japanese sources at 503,018 square miles. The population at the census of October, 1940, was 43,234,000 (23,920,000 males, 19,314,000 females). As of Jan. 1, 1940, there were estimated to be 37,581,833 Chinese and Mongols (Mongols numbered about 1,000,000), 1,162,127 Koreans, 642,356 Japanese, and 67,710 of other nationalities. Estimated populations of the chief towns in 1939 were: Mukden, 834,703; Harbin, 473,422; Hsinking, 395,855; Antung, 214,972; Kirin, 135,008; and Newchwang, 168,931.

Education and Religion. Education statistics for June, 1939, showed 15,877 primary schools with 1,579,169 pupils; 254 secondary schools, with 60,368 pupils; 14 colleges, with 4,372 students; 16 normal schools, with 4,045 students; and 65 vocational schools, with 5,043 students. According to a Japanese source, there were on Dec. 31, 1937, 1,770,692 Buddhists, 377,337 Taoists, 153,844 Roman Catholics, 132,636 Mohammedans, and 51,393 Protestants. Lamaism was believed to have far more adherents than Buddhism, but no statistics as to their number were available.

Production. Agriculture supports about 85 per cent of the population. Yields of the chief crops in 1940 were officially estimated to total 18,000,000 metric tons, divided as follows: Soybeans, 3,827,000; kaoliang, 4,407,000; millet, 3,900,000; corn, 3,075,000; wheat, 870,000; perilla seed, 47,000; cotton, about 75,000 bales (of 500 lb.); beet sugar, 25,800; rice, 942,300; tobacco, flue-cured, 14,000; flax, 3,000; hempseed, 80,400; sesamum (exports only), 9,100; Manila hemp, 14,600 in 1939. Estimated mineral and metallurgical output (in metric tons): Coal and lignite, 24,500,000 in 1941; iron ore, 1,300,000 in 1936; pig iron and ferroalloys, 736,000 in 1940; steel ingots and castings, 427,000 in 1937. Magnesite, salt, gold, lead, and oil shale are other leading minerals. At the beginning of 1939 there were 3,900 industrial establishments and business concerns. These industrial enter-

prises are almost entirely under Japanese control.

Foreign Trade. For the first nine months of 1940, merchandise imports totaled 1,337,500,000 yuan (1,749,400,000 for the full year 1939); exports, 405,300,000 yuan (665,500,000 in all of 1939). For the distribution of trade in 1939, see 1942 *YEAR BOOK*.

Finance. The general accounts or administrative budget for 1941 balanced at 649,220,000 yuan. The 1941 special accounts budget placed revenues at 1,849,077,161 and expenditures at 1,758,175,290 yuan. Public debt on Jan. 1, 1939, 858,918,000 yuan (346,750,000 borrowed in Japan). The Manchukuo yuan was pegged to the Japanese yen (at 1 yuan equals 1 yen) on Oct. 28, 1935.

Transportation. In January, 1941, Manchukuo had 7,590 miles of railway line, an increase of 1,710 miles in the preceding four years. All lines were owned or operated by the South Manchuria Railway Co., controlled by the Japanese Government. The company's revised budget for the fiscal year 1943-44 totaled 525,000,000 yen, the largest on record. Highways suitable for motor traffic extended about 27,960 miles in 1940. A network of airlines connects all of the principal cities with those of Japan, Korea, and North China. Steamer services are maintained over 4,222 miles of inland waterways. Normally three-fourths of Manchukuo's trade passes through Dairen. New trade outlets are being developed at Rashin, Korea, and at Tatung, situated at the mouth of the Yalu River.

Government. Under the Constitution of Mar. 1, 1934, as amended July 1, 1937, Manchukuo is a monarchy in which the Emperor exercises both executive and legislative powers, the latter being subject to the approval of the Legislative Council, an advisory body appointed by the Emperor. There is also a Privy Council of five members; a State Council, or cabinet, of six departments; and a General Affairs Board, attached to the State Council, which supervises budgets and national policies.

Under a protocol signed Sept. 15, 1932, Manchukuo and Japan agreed "to cooperate in the maintenance of their national security; it being understood that such Japanese forces as may be necessary for this purpose shall be stationed in Manchukuo." Actually, the government is controlled by the Japanese Ambassador to Manchukuo, who is also commander-in-chief of the Japanese and Manchukuoan troops in Manchukuo and Kwantung (q.v.). Japanese Ambassador and commander-in-chief in 1943, Lieut. Gen. Yoshikiro Umezu (appointed, September, 1939). Prime Minister, Marshal Chang Ching-hui (appointed Mar. 21, 1935).

History. The reports of growing economic and political difficulties emanating from Manchukuo in 1942 (see 1943 *YEAR BOOK*) were followed during 1943 by further reports of a similar nature. According to Japanese broadcasts of September 25, the drastic reorganization of the Japanese home front decreed by Premier Tojo was extended to Manchukuo. Prime Minister Chang Chung-hui was quoted as warning the Concordia Association, the Japanese-controlled Manchukuoan political party, of "the gravity of the current situation." He complained of lack of cooperation in the production field.

A Hsinking broadcast reported by U.S. Government monitors early in October declared that large deposits of "edible earth" were being excavated in Manchuria and mixed with flour to make "delicious bread and biscuits." Americans repatriated from Manchukuo in August in exchange for Japanese held prisoner in the United States said that drought had caused a serious crop failure and

that thousands of hungry and poorly clad Chinese and Manchus faced death from starvation or exposure during the coming winter. The entire country was said to be rife with unrest.

MANCHURIA. See JAPAN under *History*.

MANDATED TERRITORIES. Following is a list of territories conquered from the German and Turkish empires during World War I and mandated by the League of Nations to various of the Allied Powers under the terms of the Treaty of Versailles.

Iraq, a territory mandated to Great Britain, became an independent state by treaty with the mandatory power on June 30, 1930. Iraq was admitted to membership in the League of Nations and the mandate terminated on Oct. 4, 1932. Syria and Lebanon were proclaimed independent republics on Sept. 16 and Nov. 26, 1941, respectively, by Gen. Georges Catroux, the Free French High Commissioner. However the League mandate had not been terminated up to the end of 1943. See separate article on each mandated territory.

<i>Mandated Territory</i>	<i>Mandatory Power</i>	<i>Former Owner</i>
Camerouns, British.....	Great Britain	Germany
Cameroun, French.....	France	Germany
Japanese Pacific Islands.....	Japan	Germany
Nauru.....	British Empire	Germany
New Guinea, Territory of.....	Australia	Germany
Palestine.....	Great Britain	Turkey
Ruanda-Urundi.....	Belgium	Germany
Samoa, Western.....	New Zealand	Germany
South-West Africa.....	Union of South Africa	Germany
Syria and Lebanon.....	France	Turkey
Tanganyika Territory.....	Great Britain	Germany
Togo, French.....	France	Germany
Togoland.....	Great Britain	Germany

MANGANESE. Although there is no reason to believe that the United States deviated from its prewar custom of importing most of its manganese requirements, supplies of this important ferro-alloy remained plentiful throughout 1943.

Manganese ore shipments normally come to the United States from the Gold Coast and Rhodesia in Africa, not far from the lend-lease route to Red Sea and Persian Gulf ports, enabling return of ore as ballast. Moreover, it was agreed among the United Nations that manganese ore from North Africa, where French Morocco is a major producer, would be shipped to the United States. While probably less than 100,000 tons annually has been mined in this latter area, ballast shipments again were possible. Although U-boats were a menace in the Caribbean early in the year, in later months trade routes were open to Cuban and Brazilian deposits. Extensive development work by a Homestake Mining Co. subsidiary in Lower California, Mexico, was completed during the year, and arrangements were made to mine and mill manganese ores there on a large scale, it was reported.

A substantial rhodochrosite deposit in Montana continued in production, and a calcining plant to convert this ore to usable form, was completed and substantial tonnages were produced during the year. Likewise, a beneficiation plant to treat a low grade southern Nevada ore deposit was placed in operation near Las Vegas, Nev. Battery grade ore, which is particularly rich, was mined in surprisingly large quantities near Livermore, Calif.

Metals Reserve Co., the Federal ore-buying agency, has committed itself to a purchase of small lots of manganese ore through 1944, these purchases to be made at any of 21 depots in ten western States. On May 15, 1943, upon the recommendation of the War Production Board ferro-

alloys branch, Metals Reserve Co. revised its purchase price schedule, raising prices somewhat on lower grade ores, and agreed to purchase carbonate as well as oxide ore. The base price established on this schedule is \$48 per long dry ton for ores and concentrates analyzing 48 per cent manganese, 6 per cent iron, and 11 per cent silica plus alumina.

The War Production Board early in 1944 released figures on United States' production consumption, and stocks of manganese, as follows: Domestic production in 1943, 175,000 tons (30,683 tons prewar); domestic consumption 1,400,000 tons (674,583 prewar); stocks of manganese on Dec. 31, 1943, 1,525,000 tons. See GEOLOGICAL SURVEY.

CHARLES T. POST.

MANITOBA. A prairie province of Canada. Area, 246,512 square miles, including 26,789 square miles of fresh water. Population (1941 census), 729,744 (378,079 male; 351,665 female), of these, by racial origin, British totaled 360,560, Ukrainian 89,762, French 52,996, German 41,479, Netherlands 39,204, Polish 36,550, Scandinavian 32,620, Jewish 18,879, etc. Religious membership (1941 census): Roman Catholic 203,259, United Church 194,001, Anglican 125,076, Lutheran 48,213, Presbyterian 43,075, Mennonite 39,836, Greek Orthodox 20,777, Jewish 18,715, etc. Chief cities: Winnipeg (capital) 221,960 inhabitants in 1941, St. Boniface 18,157, Brandon 17,383, Portage la Prairie 7,187. In 1942 there were 15,670 live births, 6,410 deaths, and 8,395 marriages. Education (1940-41): 150,657 students enrolled in schools and colleges.

Production. The gross value of agricultural output for 1942 was \$181,575,000 (field crops \$111,372,000, farm animals \$34,734,000, milk \$18,777,000, poultry and eggs \$12,616,000, fruits and vegetables \$2,118,000). Chief field crops (1942): wheat 52,000,000 bu., oats 70,000,000 bu., barley 74,000,000 bu., rye 3,600,000 bu., flaxseed 2,000,000 bu., potatoes 118,900 tons, turnips, etc. 16,200 tons, hay and clover 792,000 tons, alfalfa 480,000 tons, fodder corn 150,000 tons, sugar beets 129,000 tons. Livestock (June 1, 1943): 927,500 cattle (including 370,000 milk cows), 298,500 horses, 327,000 sheep, 877,000 swine, 8,052,000 hens and chickens, 511,600 turkeys. Fur output (1941-42): 844,631 pelts valued at \$2,596,436. Fisheries catch (1942): \$3,577,616.

Mineral output (1942) was valued at \$14,643,269, of which metals accounted for \$11,791,530 (gold, 138,606 fine oz., \$5,338,641), and clay products, etc. for \$2,255,062. Manufacturing (1941): 1,184 plants, 32,262 employees, \$40,894,267 for salaries and wages, \$132,330,823 for cost of materials, \$74,450,721 was the net value of production.

Government. Finance (year ended Apr. 30, 1942): revenue \$19,920,813; expenditure \$18,151,988; total direct and indirect liabilities (less sinking funds) \$115,936,058. The executive power is vested in a lieutenant governor who is advised by a ministry of the legislature. In the Legislative Assembly there are 55 members elected for a five-year term by popular vote of the adult population (26 Progressive Liberal, 15 Conservative, 7 Independent, and 7 other members were elected at the provincial election of Apr. 24, 1941). Six members (appointed for life) in the Senate and 17 members in the House of Commons represent Manitoba in the Dominion Parliament at Ottawa. Lieut. Gov., R. F. McWilliams (appointed Nov. 1, 1940); Premier S. S. Garson (appointed Jan. 14, 1943).

MANPOWER MOBILIZATION. See CANADA, GERMANY, GREAT BRITAIN, ITALY, JAPAN, and other belligerent countries, under *History*.

MANPOWER PRIORITIES COMMITTEES. See LABOR CONDITIONS under *Employment*.

MANPOWER SHORTAGES, U.S. See BUSINESS REVIEW; LABOR CONDITIONS; SELECTIVE SERVICE SYSTEM; STATE LEGISLATION under *Labor*; UNITED STATES under *Manpower*; WAR MANPOWER COMMISSION; WAR PRODUCTION BOARD. See also the numerous businesses, professions, and products which were affected by inadequate manpower supply during 1943, as AERONAUTICS; BUILDING MATERIALS; CHEMICAL INDUSTRIES; CIVIL SERVICE COMMISSION; COPPER; EDUCATION; ELECTRICAL INDUSTRIES; FIRE PROTECTION; FOOD INDUSTRY; INSURANCE; LIBRARY PROGRESS; MACHINERY INDUSTRY; MOTOR VEHICLES; NATIONAL HOUSING AGENCY; PAPER AND PULP; RAILWAYS, etc.

MANPOWER UTILIZATION, Bureau of. See WMC.

MANUFACTURING. See BUSINESS REVIEW and the topics there listed.

MAPPING. See COAST AND GEODETIC SURVEY; GEOLOGICAL SURVEY, specifically for *Aeronautical Piloting Maps*; PHOTOGRAPHY.

MARCUS. A small island in the Pacific, 1,185 miles southeast of Tokyo, occupied by the Japanese in 1899. It was raided by United States naval forces on Sept. 1, 1943.

MARETH LINE. See WORLD WAR under *The Mediterranean Fronts*.

MARIANA ISLANDS. See JAPANESE PACIFIC ISLANDS.

MARIHUANA. See NARCOTIC DRUGS CONTROL.

MARINE CORPS. See MILITARY PROGRESS.

MARINE INSPECTION, Division of. See COAST GUARD.

MARITIME COMMISSION, U.S. The United States Maritime Commission, operating under mandate of Congress since 1937 to develop and maintain a strong Merchant Marine "manned with a trained and efficient citizen personnel," is producing and manning shipping tonnage at a rate never before attained by any nation. That the threefold project of building ships, training personnel, and transporting material and supplies to the fighting fronts of a global war is being successfully performed, is evidenced by figures from shipyards, from maritime training centers, and from the War Shipping Administration.

Early in 1942, President Roosevelt directed that the ship production for 1943 should total 16,000,000 tons deadweight. With production accelerated, the President's original request was increased to 18,890,000 tons deadweight, and the Maritime Commission extended every facility to meet this demand. By Dec. 1, 1943, a total of 17,194,387 tons deadweight comprising 1,688 vessels had been delivered to the Maritime Commission. This includes 1,118 Liberty Ships, 146 C-types, 217 tankers, 1 passenger cargo vessel, 31 coastal cargo vessels, 41 ocean-going tugs, 16 ore carriers, 23 barges, and 97 special types. The shipbuilding goal of 24,000,000 deadweight tons for 1942 and 1943 was passed in mid-November. By Jan. 1, 1944, the total delivered to the Maritime Commission was 19,238,626 tons dead weight.

A survey of shipbuilding facilities in the United States in 1937 revealed the existence of but 10 yards with 46 shipways capable of building ocean-going vessels of 400 feet in length. Facilities have been expanded so that now approximately 70

shipyards with more than 300 shipways located in 24 States are building and repairing ships. More than 700,000 persons, 14 per cent of whom are women, are employed in this work.

The year 1944 will see a part of the Liberty Ship program superseded by deliveries of a larger, faster, and generally more efficient ship known as the Victory Ship. This vessel is of standardized construction, designed to use geared turbine propulsion machinery of more than 6,000 horsepower, with a speed of 15 to 17 knots as compared to about 11 knots for the Liberty Ship. See also SHIPBUILDING.

Projecting the shipbuilding program to the end of 1944, the Maritime Commission will by then have added approximately 2,000 new ships of various types to those already delivered or scheduled for completion by the end of 1943.

Of great importance, also, in our maritime program is the maintenance and repair of this vast merchant fleet. For every ship going down the ways an average of 42 merchant seamen is needed to carry on its operations. The training of marine personnel, officers, and seamen, originally supervised by the Maritime Commission and in the early part of 1942 assigned to the Coast Guard, was transferred, by executive order, to the War Shipping Administration in July, 1942.

The Training Organization of the War Shipping Administration is made up of three divisions: (1) the United States Merchant Marine Cadet Corps, which trains a selected group of young men as marine officers; (2) the Maritime Service, which operates schools for training apprentice seamen, for upgrading of unlicensed personnel to officers, for upgrading licensed personnel, and for specialized training and (3) five State Academies operated under their respective State governments, but with partial support from Federal funds. Graduates from these Academies become officers in the United States Merchant Marine or are commissioned officers in the Naval Reserve. From 1938 to Sept. 1, 1943, the training program made available to the Merchant Marine 9,169 officers, 1,261 radio operators, and 36,568 unlicensed seamen in all ratings, or a grand total of 46,998 men.

The Recruitment and Manning Organization of the War Shipping Administration is charged with supplementing the efforts of owners, operators, and maritime unions in properly and adequately manning ships of the Merchant Marine. From May, 1942, to Sept. 1, 1943, the organization placed over 50,000 men aboard ship.

The War Shipping Administration has the duty of operating ships for the duration. Each month war materials and men must be transported to our fighting fronts. Each soldier needs from five to 12 tons of supplies upon disembarking and requires at least two tons a month while in combat service. Besides this, ships of the United States Merchant Marine must carry lend-lease goods and other authorized exports and bring back to this country strategic raw materials.

The War Shipping Administration was made the representative of the United States Government for cooperation with the British Ministry of War Transport and similar shipping agencies of other United Nations engaged in wartime shipping. Representatives from these British and American agencies make up the Combined Shipping Adjustment Board, which jointly operates the pools of American and British shipping from offices in Washington and London. Thus the Board is able to plan operations on an international scale,

and by coordinating its activities with the Chiefs of Staff and other agencies of the United Nations, it regulates the flow of raw materials to industrial centers, from there to the fighting fronts, and also provides shipping for the transport of essential goods for the all-out war effort. See SHIPBUILDING; SHIPPING.

EMORY S. LAND.

MARKETING. See AGRICULTURE; BUSINESS REVIEW and the topics there listed; AGRICULTURAL and CONSUMERS COOPERATION; UNITED NATIONS.

MARKLE FOUNDATION. See PHILANTHROPY under *Foundation Activities*.

MARQUESAS ISLANDS. See OCEANIA, FRENCH.

MARRIAGE LAWS. See STATE LEGISLATION under *Social Legislation*.

MARS (MARTIN XPB2M-1). See AERONAUTICS under *American Transports and Naval Air Transport*.

MARSHALL ISLANDS. See JAPANESE PACIFIC ISLANDS.

MARTIAL LAW. See LAW under *War Decisions*; ARGENTINA, HAWAII, NETHERLANDS, and NORWAY, under *History*.

MARTIN B-26, PBM, AND XPB2M-1. See AERONAUTICS under *Types and American Transports*.

MARTINIQUE. A French island colony in the West Indies, between the British islands of Dominica and St. Lucia. Area, 385 square miles; population (Jan. 1, 1940), 260,000, mostly Negro and mulatto, with about 5,000 whites. Fort-de-France, the capital, had 52,051 inhabitants; Le Lamentin, 16,303.

Production, etc. Sugar (55,000 metric tons in 1940-41), cacao, bananas, pineapples, and rum are the main products. Trade (1938; in U.S. dollars): imports \$6,756,000; exports \$8,918,000. Budget (1937): 101,100,000 francs.

Government. Until the fall of France in June, 1940, Martinique and Guadeloupe were each administered by a Governor, a Privy Council, and a General Council. Under the democratic Third Republic, all citizens without regard to color enjoyed the same civil and political rights as Frenchmen in the mother country. The General Council, which passed upon the budget, and the municipal councils were elected by universal suffrage. In addition, each colony was represented in the French Parliament by one senator and two deputies.

This democratic system, which had won the loyalty of the colored population, was discarded after Marshal Pétain established his authoritarian Government at Vichy, France. On Dec. 4, 1940, Pétain appointed Adm. Georges Robert, commander-in-chief of all French West Indian forces, as his High Commissioner for the colonies of Martinique, Guadeloupe, and French Guiana. Robert used dictatorial powers to bring all military, political, and economic activities under his control. The Councils General, the municipal councils, and other democratic institutions were suppressed. The colonial and local administrative officials were replaced by naval officers or by Pétain supporters among the small white and upper-class mulatto minority. Robert, on Dec. 13, 1940, named Yves Nicolle Governor of Martinique and M. Saurin Governor of Guadeloupe.

All persons affiliated with Masonic lodges or suspected of de Gaullist or pro-Allied sympathies were weeded out of the Government service and some were imprisoned. They were replaced by pro-Vichy agents from France or by officers or sailors from the French warships that had taken refuge at Fort-de-France. The Navy took over the direction of the police and information services. Criticism of

the Vichy Government or its officials was forbidden along with the expression of pro-Allied sentiments. The people of the islands were forbidden to listen to British or American radio broadcasts while the French naval information officers at Fort-de-France carried on a vigorous anti-British and anti-American propaganda. Meanwhile much of the anti-democratic legislation decreed by the Pétain Government in France was placed in effect in the French West Indies. For developments in 1943, see below.

History. Steady politico-economic pressure by the United States, rioting by the colored population, and a military revolt forced Admiral Robert on July 14, 1943, to terminate the authority of the Vichy Government and surrender his powers to Henri-Etienne Hoppenot, the Delegate Extraordinary of the French Committee of National Liberation at Algiers. Upon arriving at Fort-de-France Hoppenot announced the abrogation of the laws and decrees issued by Admiral Robert on behalf of the Vichy Government and pledged the restoration of the republican system of government.

As a result of this overturn, the aircraft carrier *Béarn* and several other French warships at Fort-de-France, 140,000 tons of merchant shipping, and all the facilities and resources of Martinique and Guadeloupe were placed at the disposal of the United Nations war effort. Some \$250,000,000 of French Government gold stocks, stored at Fort-de-France since the French capitulation to Germany, was held in trust for the Government of liberated France.

Robert's hold on the islands became increasingly precarious when he reiterated his allegiance to Marshal Pétain after the Pétain regime in November, 1942, broke off relations with the United States and acquiesced in the German occupation of all France (see 1943 YEAR BOOK, p. 396-397). The United States then discontinued the small shipments of food and other essential articles that it had permitted to reach Martinique and Guadeloupe. This deepened the already acute economic crisis and added to revolutionary discontent among the population.

Admiral Robert refused to go through with the agreement for closer cooperation with the United States, announced by Secretary of State Cordell Hull on Nov. 23, 1942. He gave as his reason the Anglo-American landings in French North Africa. General Giraud early in 1943 sent an emissary, Rear Admiral Battet, to Martinique to win Robert over to active collaboration with the United Nations. But Robert threatened to arrest the emissary unless he left immediately. He also prepared to scuttle all French naval and merchant ships under his control in the event of an American invasion.

The High Commissioner's position was further weakened by the secession of French Guiana (q.v.) from his authority on March 18 and by the action of the U.S. Government in withdrawing its Consul General from Fort-de-France and terminating all political negotiations (April 26). Meanwhile hundreds of Negroes and scores of white Frenchmen fled from Martinique and Guadeloupe to nearby islands, some of them on their way to join the forces of Generals de Gaulle or Giraud. Early in May four men were killed by police in suppressing anti-Government disorders in Guadeloupe. On June 4 another revolt broke out in Guadeloupe under the leadership of M. Valentino, a full-blooded Negro who had been president of the island's General Council. It was broken up by a few volleys from the training ship *Jeanne d'Arc*, moored off Pointe-a-Pitre. On June 24 large de Gaullist demon-

strations occurred in Fort-de-France, Martinique. The demonstrators defied Admiral Robert and forced the release of their arrested leaders. Several hundred soldiers under the command of a captain then took possession of Camp Balata near Fort-de-France and demanded Robert's resignation.

The situation in both islands became so menacing that Admiral Robert on June 30 broadcast a statement over the Martinique radio asking that "to avoid bloodshed" the U.S. Government dispatch a "plenipotentiary to fix the terms for a change of French authority." He insisted, however, upon guarantees of French sovereignty over the islands and that there would be no American occupation. Adm. John H. Hoover, commander of the U.S. Caribbean Sea forces, was designated by the State and Navy Departments at Washington to open negotiations. He arrived in Martinique July 3. On the same day the newly formed French Committee of National Liberation in Algiers intervened directly in the situation. It appointed M. Hoppenot, who was then in Washington with a mission headed by General Giraud, to negotiate an agreement for the transfer of the islands to its control.

Indicating the difficulty of restraining opposition elements, Admiral Robert on July 8 broadcast another appeal for M. Hoppenot to go to Martinique as soon as possible. The United States, however, had not recognized the French Committee of National Liberation as the provisional government of France. It was not until after arrangements fully safeguarding American military interests in the Caribbean had been concluded by M. Hoppenot and American naval authorities that the State Department "accepted" Hoppenot's designation as Acting High Commissioner for the French West Indies on July 13. See FRANCE under *History*.

Robert left Fort-de-France for Puerto Rico upon the arrival of Hoppenot. The U.S. Government ordered its Consul General to return to Fort-de-France and announced that it would cooperate in restoring the economic life of the French islands. A United States relief ship, bearing 5,000,000 lb. of food and clothing, arrived at Fort-de-France July 17. On July 21 1,200 Negroes who had fled to the Dominican Republic during the Robert regime were welcomed back to Martinique by cheering thousands. On September 14 the French Committee of National Liberation appointed Louis Ponton to be Governor of Martinique.

MARVINOL. See RUBBER.

MARXIST ETHICS. See PHILOSOPHY.

MARYLAND. A South Atlantic State. Area: 10,577 sq. mi. Population: 1,821,244 (1940 census); 1,964,914 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Herbert R. O'Connor (Dem.), inaugurated in January, 1943, for his second four-year term; Secretary of State, Thomas

Elmo Jones; Attorney General, William C. Walsh. See WATER SUPPLY.

MASONS. See ALGERIA and FRANCE under *History*; FREEMASONRY.

MASSACHUSETTS. A New England State. Area: 8,257 sq. mi. Population: 4,316,721 (1940 census); 4,156,346 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Leverett Saltonstall (Rep.), inaugurated in January, 1943, for his third two-year term; Lieutenant Governor, Horace T. Cahill; Secretary of State, Frederick W. Cook; Attorney General, Robert T. Bushnell.

MATERIAL COORDINATING COMMITTEE (Canada and the United States). A Committee created May 14, 1941, to make possible the free exchange of vital information between responsible officials of Canada and the United States relating to their supplies of strategic raw materials required for defense production. The United States members are William L. Batt, Howard C. Sykes, and Frederick M. Eaton. The Canadian members are G. C. Bateman and H. J. Symington, Members of the Canadian Wartime Industry Control Board.

MATERIEL COMMAND, WAR MATERIEL. See AERONAUTICS; MILITARY PROGRESS; NAVAL PROGRESS. Compare topics listed under MUNITIONS and WAR PRODUCTION.

MATERNAL WELFARE. See BIRTH CONTROL; CHILDREN'S BUREAU.

MATHEMATICS, Teaching of. See EDUCATION.

MAURITANIA. See FRENCH WEST AFRICA.

MAURITIUS. A British colony in the Indian Ocean, comprising the island of Mauritius (720 sq. mi.; pop. 420,861 on Jan. 1, 1941) and its dependent islands, 230 to 1,200 miles away (87 sq. mi.; pop. 12,507). Capital, Port Louis, with 57,803 inhabitants including suburbs in 1941.

Production and Trade. The chief products are sugar (322,000 tons in 1941), copra (exports, 1,600 metric tons in 1939), aloë fiber, tobacco, and tea. Merchandise imports in 1941 were valued at more than Rs40,000,000 (Rs37,000,000 in 1940); domestic exports Rs56,000,000 (Rs32,000,000). The rupee averaged \$0.3016 in 1940 and \$0.3014 in 1941. Finance (1941-42): revenue Rs23,661,000; expenditure Rs22,122,000. Public debt, June 30, 1940, £2,218,539. There are 146 miles of railway line, 862 miles of roads, and shipping services from Port Louis to African and Indian ports. Shipping (1940): 165 vessels totaling 509,199 tons entered.

Government. The Governor is assisted by an Executive Council and a Council of Government of 27 members (8 ex-officio, 9 nominated, and 10 elected by restricted franchise). Governor, Sir

Donald Mackenzie-Kennedy (appointed May 15, 1942).

MAY ACT. See topics listed under PROSTITUTION, especially FBI.

MAYOTTE. See MADAGASCAR.

MEAT. See FOOD INDUSTRY; LIVESTOCK; PRICE ADMINISTRATION.

MECKLENBURG. See GERMANY under *Area and Population*.

MEDICAL-DENTAL CONVENTION. See DENTISTRY.

MEDICINE AND SURGERY. The Office of War Information has released a report on the state of health among the armed services. In the previous 18 months there have been flare-ups of diseases, but only cerebro-spinal meningitis reached epidemic proportions, and its death toll was low. The situation in units overseas seemed even better. In those diseases for which vaccine had been developed, namely, typhoid, smallpox, tetanus, typhus, yellow-fever, cholera, and plague, it is excellent. Malaria and dysentery present a serious problem in land combat conditions, and the Navy has reported some trouble with infectious jaundice and with filariasis. Disease incidence reported in 1942 was lower than the preceding year and continued good in 1943. An average of a little more than three per cent of the Army personnel in this country was off duty because of sickness or non-battle injuries at any given time during 1942. Similar, though perhaps lower, averages obtained for the Navy. Cerebro-spinal fever, which threatened to reach epidemic proportions in the early months of 1943, was controlled promptly in service posts, through the use of sulfonamides to treat those infected, and also by preventive doses to those who might have had contact with the stricken men.

Deaths, which in previous epidemics ran from 30 to 40 per cent of those contracting the disease, were held to three to five deaths out of every 100 cases. In this war there have been no cases of yellow fever in either the Army or the Navy, and only a scattering of reports among the other diseases for which preventive vaccines have been given. The Army reported about 60 cases of typhoid fever, but with very few deaths. The Navy had eight cases with one death in 1942.

Dysenteries and diarrhea, including food poisoning, is the Army's second greatest disease threat in the number of cases among overseas troops. The Army reports about seven cases per 1,000 men in the Continental United States for 1942. In combat zones abroad admissions for treatment averaged about 30 men per 1,000 annually in 1942, and 50 in 1943—a very good record in contrast with the last war.

Malaria is a leading disease overseas in land operation in malarious areas. Rates of infection in particular theaters are held secret for security reasons, but strong preventive action is being taken, and the Army and Navy believe our record is superior to that of the enemy forces. There seem to be adequate supplies of essential drugs.

Other facts of interest in this report consist of data concerning personnel and physical equipment. The Army has a dental corps of about 13,000 officers. Those in the service now have a record of 4,000,000 cases during 1942, with more than twelve and one-half million sittings. (See DENTISTRY.) Quite amazing is it to learn that the Army maintains about 80 general hospitals in the United States. These generally contain a thousand beds or more, each. Backing up these large institutions the department maintains hospitals of from 25 up to

1,000 or more beds at some 600 posts, camps, and stations around the world. The number of beds available in the United States for Army personnel totaled about 350,000 in September, with more hospitals building. The Navy maintains 36 hospitals and seven convalescent hospitals, with a total of 40,000 beds in the United States alone, in addition to dispensaries at posts and stations with a total of 25,000 beds.

Among the civilian population, in spite of the war, and either as the result of the application of specific and general prophylactic measures, or because of a change in the nature of the diseases, the death rate for scarlet fever, whooping cough, diphtheria, influenza, pneumonia, tuberculosis, typhoid fever, appendicitis, and puerperal fever has reached the lowest level ever recorded by a large life insurance company (*Statist. Bull. Metrop. Life Insur. Co.*, 23:1-3, July, 1942). Most striking is the reduction by 55 per cent of the mortality from the various types of pneumonia from 1938 to 1942. In the ten years prior to 1938, the year in which sulfa-pyridine was first used, the death rate never fell below 79 per 100,000, but by 1942, the rate dropped to 32 per 100,000. (See VITAL STATISTICS.)

Refrigeration (Crymo Anesthesia). A discussion of crymo-therapy appeared in these columns at an earlier date. Its earliest application appeared in the treatment of metastatic malignancy. This work was pioneered in Philadelphia by Temple Fay. Talbot, of Boston, utilizing an easily portable apparatus, has reported exhaustive investigations into the biochemical changes associated with lowering of the body temperature. He has further experimented in the use of this method in the treatment of various organic-mental diseases, as well as in drug and alcohol addiction; although no conclusions of far reaching consequence have been forthcoming from such studies as yet. This year has seen further application of the method in the development of refrigeration anesthesia.

The fundamental work in this form of anesthesia was done by Frederick M. Allen and his collaborators in the City Hospital of New York and experiments to extend the application are being continued in the New York Medical College. The basic principles and the main results, so far, of the new method have been reviewed in a recent meeting of the American Congress of Physical Therapy. For some time it has been known that tissues can be kept alive for many days at ice-box temperature, provided they are not frozen. In experiments, Allen has demonstrated that the cooling of limbs and other parts with ice water, or ice cracked and pulverized, down to near the freezing point, say five degrees Centigrade, or 40 degrees Fahrenheit is harmless. There is a temporary suspension of life with resumption of cellular activity as the temperature returns to normal. Oxygen consumption of the tissues can be reduced about 13 per cent for each degree Centigrade. Now, when a tourniquet is applied to a limb so refrigerated the skin temperature falls to two to four degrees Centigrade and surgical anesthesia is complete within about two hours. Needless to say, freezing must be avoided, and for this reason, salt must not be used. Refrigeration without a tourniquet is useful but not completely anesthetic. Refrigeration with a tourniquet affords surgical anesthesia and does not of itself require amputation. The method was first used for amputation of partially gangrenous extremities of patients in the older age group. There has been some caution in applying it to the traumatic cases. However, experience with the method is growing; it is

now known that a human limb can be kept bloodless and anesthetic below the tourniquet for at least eight hours and the indications are much longer, even up to 48 hours, without injury, while the rest of the body remains warm. Amputation is done without pain, loss of blood or strength, and also without shock. The nerves in the cooled, bloodless tissues cannot transmit painful impulses or harmful reactions. Toxic products are not absorbed from the refrigerated limb; infection or its extension is prevented.

Refrigeration anesthesia provides for a bloodless and shockless amputation, apparently without interfering with the healing of the stump, which can be cooled as desired by gradual removal of the refrigeration. So far, the reports of the results of major amputation by this method have been uniformly favorable. An editorial of the J.A.M.A. (May 15, 1943) states as follows: "Refrigeration anesthesia undoubtedly is destined to increasing use under civilian conditions as well as in war. In trauma of the limb, for instance, which is common in war, refrigeration anesthesia will be of special service, not only in amputation, but also in the control of hemorrhage, pain, progressive shock, and infection during the transportation of the patient, when adequate treatment cannot be applied on the spot. The methods of refrigeration anesthesia are being standardized. In the New York City Hospital a controllable electric refrigeration apparatus is in use. Light equipment has been devised for connection of engines of motor vehicles and problems of the tourniquet are receiving attention. Obviously, the field of refrigeration anesthesia, besides the great variety of injuries, will include also the vascular diseases that endanger the life of limbs. Refrigeration anesthesia is an important advance in treatment. For the sake of its great practical significance, the work under way in this field should be pushed ahead, and the clinical application of the method expanded. Among the developments under immediate trial are refrigeration as an anesthetic for skin grafting and the treatment of frostbite."

Continuous Caudal Analgesia in Obstetrics. This year has seen the introduction and extension of a most important advance in anesthesia. This method has to do with the relief of pain in childbirth, which has been one of the long sought goals of the medical profession. The method is called "Continuous Caudal Analgesia." Credit for its introduction goes to Hingson and Edwards, working in the U.S. Public Health Service Marine Hospital, at Stapleton, on Staten Island in New York. The technique of caudal anesthesia in obstetrics is in itself by no means new, dating as far back as 1911.

The continuous application of caudal anesthesia—starting in the early stages of labor, to relieve the pain and discomfort for the parturient in this period with the added advantage of continuing the analgesia until the completion of labor and postpartum repair—constitutes, indeed, a most significant advance. Since the introduction of this method it has been tried in some 19 clinics associated with medical schools and well established hospitals. Altogether, some 589 women have been delivered of babies by this method, without maternal mortality and with only three instances in which infants died—these without reference to the method of analgesia which was employed.

The application of the method is by no means without hazard. In developing their technique Doctors Hingson and Edwards have traveled frequently to leading institutions of medical education and lying-in hospitals in order to train men work-

ing in these fields in the technique. A recent attempt on the part of the editors of the J.A.M.A. to assemble the opinions of some of those who have had opportunity to test the method under control conditions in hospitals resulted in almost uniformly favorable impressions. It is emphasized, however, that the method should be used only in hospitals in which there are available the services of persons trained in the administration of the analgesia, and of sufficient competence to conduct a delivery with scientific consideration and finesse associated with the special practice of the obstetric art.

Advances in Sulfonamide Therapy. The past year has not witnessed the introduction of any new sulfonamide of any particular promise. It has, however, seen succinyl-sulfathiazole, a comparatively new sulfonamide commercially known as sulfasuxidine, largely replace sulfaguanidine for use chiefly in the preparation of patients for surgery of the bowel. This is known as one of the relatively insoluble sulfonamides and its use has been further extended to the treatment of bacillary dysentery and epidemic neonatal diarrhea. Also the year has seen sulfamerazine replace sulfamethazine (see YEAR BOOK 1943, p. 401). Hall and Fink, from the University of Minnesota Medical School, have reported the result of their experience in the treatment of 116 patients with sulfamerazine and its sodium salts in a variety of clinical conditions. They conclude that sulfamerazine appeared to be as effective as sulfadiazene in the treatment of 40 cases of pneumococcal pneumonia or bronchitis. It was somewhat less effective than sulfathiazole in the treatment of staphylococcus sepsis. Thirty-three patients with staphylococcal infections responded as well to sulfamerazine as a comparable group did to sulfadiazene.

Compared to sulfadiazene, when sulfamerazine was given orally, adequate blood concentration necessitated smaller doses given less frequently. Because sulfamerazine is retained in the body for a longer period of time than sulfadiazene, doses of the former may be given at less frequent intervals. Because of its increased solubility in urine and lower rate of excretion, it was hoped that the appearance of renal complications would be eliminated by the use of sulfamerazine, in place of sulfadiazene. Two patients, however, developed hematuria crystalluria and reduced the urine output, when sulfamerazine was given orally.

This report is the first to appear concerning the value of sulfamerazine in the treatment of human infections, and while its advantages may not seem numerous, still its more rapid absorption from the gastro-intestinal tract than is possible with sulfadiazene, may prove significant. When sulfamerazine was administered it appeared that adequate blood levels could be quickly obtained without the necessity of giving the sodium salt intravenously, and such levels could be maintained by giving only one or two doses by mouth daily.

One of the most spectacular triumphs of sulfonamide therapy is to be found in its use in the treatment of cerebro-spinal fever. Until recently many clinicians experienced in this disease advised combined treatment of some form of antiserum and a sulfonamide compound, at least for the most serious cases. The shift from intraspinal to intravenous serum therapy has prevailed generally for some time. Accumulation of data now seems to show that the drug treatment alone will bring better results. The disagreeable and sometimes dangerous reactions associated with all sorts of serum therapy are well known.

A recent editorial in the J.A.M.A. (Feb. 13,



Press Association Photos

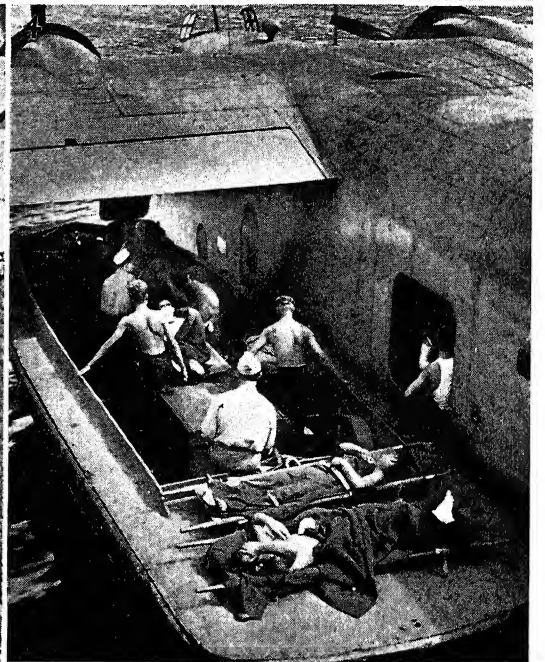
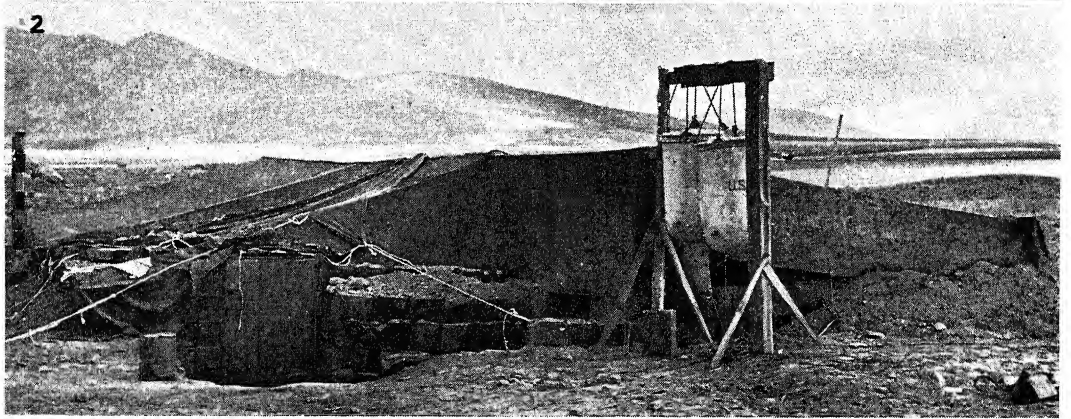
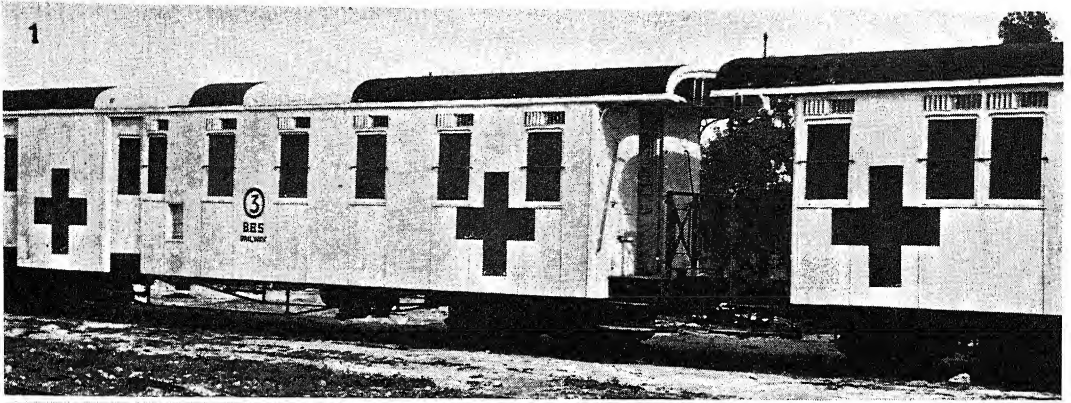
THE INEVITABLE PRICE OF WAR

Above: Americans who gave their lives at Tarawa. Right: Victims of Japanese snipers on the beach at Buna. Below: A military funeral at an American cemetery somewhere in New Guinea.



Signal Corps Photo





MODERN RESOURCES MARSHALED TO REDUCE THE TOLL AMONG THE WOUNDED

Sensational advances in treatment (see *Medicine*) combined with speed and skill in the field have operated to reduce substantially the proportion of fatal injuries as compared with previous wars. 1. A hospital and ambulance train built from salvaged passenger cars in Egypt (Signal Corps Photo). 2. A field hospital in North Africa (Signal Corps Photo). 3. A Douglas C-39 transport converted into an ambulance plane (Official Photo U.S. Air Forces). 4. Soldiers wounded in the invasion of Makin transferred from a landing barge to a Navy plane which will fly them to a hospital base (Official U.S. Coast Guard Photo).

1943) states as follows: "In England a statistically adequate number of patients treated with serum alone gave a fatality rate of 36.6 per cent, as a whole. With sulfonamide compound plus serum, there was a total fatality of 13.8 per cent, and with the use of sulfonamide compounds alone a total fatality of 9.2 per cent. Aside from a few rare and practically always fatal cases the prompt diagnosis and early vigorous treatment, preferably with sulfadiazene, will save cases which had fatal prognosis with serum therapy, and in practically all cases recovery is much more prompt." Here again, the miracles of chemotherapy supplant the more cumbersome biologicals.

Continued research into the mechanism of the action of sulfonamide compounds has given support to the current ideas that bacteriostasis depends on specific inhibition of an enzymatic reaction, involving para-amino-benzoic acid, one of the less well known components of the Vitamin B Complex. These enzymes are protein in nature and inhibition of their action involves some form of chemical interaction between the inhibitor and the enzyme. The problem of sulfonamide fastness or the ability of certain bacteria to resist the effect of sulfonamide has received considerable study.

An increase in the amount of para-amino-benzoic acid is supposedly one of the chief causes of the resistance to the action of sulfonamide compounds, but this could not be proved until a method was devised by which that substance in cultures of bacteria could be detected and measured. By applying a new technique to the cultures of certain staphylococci that were resistant to sulfonamide compounds, Landy and his associates, (*J. Bio. Chem.*, 146:109-114, November, 1942) have shown that this was so. At least the resistant staphylococci make 70 times as much para-amino-benzoic acid in a synthetic medium as do parent drug-sensitive strains of the same bacteria. Drug-fast staphylococci elaborate much more para-amino-benzoic acid than do other varieties of bacteria tested, and evidence suggests that the ability to produce these large amounts is permanent. On the other hand the resistant strains of *Escherichia coli*, *Vibrio cholerae*, *Salmonella dysenteriae*, and *Diplococcus pneumoniae* produced no more demonstrable para-amino-benzoic acid, than did their parent drug sensitive forms. Some other anti-sulfonamide metabolites may eventually be discovered to account for the resistance of drug fast bacteria of these varieties to the action of the sulfonamide compounds. Methods for overcoming the resistance to the sulfonamide compounds have been recently suggested. The addition of urea has inhibited the growth of resistant staphylococci in a concentration of sodium sulfathiazole, which alone was ineffective, thus overcoming their drug-fastness.

It is to be hoped that this innovation in chemotherapy will prove to be effective clinically. Another way to deal with drug-fast types of bacteria, at least some of them, is to use penicillin, to which they are sensitive. Unfortunately, according to some investigators, pneumococci, staphylococci, and hemolytic streptococci may also become penicillin-fast. Whether this tendency is clinically significant as yet, is not known.

Rheumatic Heart Disease. The most important recent advance with respect to rheumatic heart disease is the accumulation of evidence that recrudescences may be prevented by the use of one or other of the sulfonamide drugs. It may almost be stated as a fact that recurrences of rheumatic activity may be prevented in over 90 per cent of those so treated, and that the natural history of

the disease as a consequence may undergo a substantial change. For a disease from which over a million adults suffer, and from which the yearly deaths total nearly 40,000, such an advance is most significant.

Kuttner and Rayersback, (*J. of Clinical Investigation*, 22:77, 1943) have carried out a careful study, the results of which confirm the fact that streptococcal infections of the upper respiratory tract and rheumatic relapses in rheumatic children are prevented by the prophylactic administration of sulfonamides. Their studies were carried out during two successive winters on rheumatic children living in an institution. There was every facility for daily clinical observation and routine bacteriologic study. Other studies have been conducted on this problem, and there now seems little question that, when properly employed, sulfonamide drugs will guard the heart of severely rheumatic children.

Still another drug has recently been shown to have prophylactic value in preventing rheumatic recurrences. This is none other than sodium salicylate, which has a long and honorable record in the treatment of rheumatic fever. Coburn and Moore (*J. of Pediatrics*, 21:180, 1942) encouraged by good news of preventive tests on rheumatic children by English physicians began a study in which they asked cases of quiescent rheumatic heart disease to report to the clinic at the onset of any attack of pharyngitis. At this time cultures of materials from the throat were made and a daily ration of four to six grams of salicylate was begun. If the cultures contained an organism other than group A, hemolytic streptococcus, treatment was discontinued and the patient omitted from the study. All but one of 47 patients treated with salicylates escaped clinical manifestations of rheumatic fever, while 57 of 139 controls, suffered recurrences. While there do not seem to be any comparable studies showing that the salicylates have any great value in preventing rheumatic occurrences, the advantages of their use are obvious, especially the advantage that they may be successfully used during or immediately after the first phase (the respiratory infection) at which time the sulfonamide compounds are not only valueless, but contraindicated.

Arterial Hypertension. A brief review is impossible for the large number of studies reported on the mechanism of arterial hypertension in animals, and the clinical counterpart in man. There seems little reason to doubt that constriction of the renal arteries in various animals may lead to permanent hypertension, due to a humoral mechanism of renal origin. There is also good evidence that this hypertension is due to the liberation of a substance, renin, which interacts with another substance, renin-activator, or hypertension precursor to form the effective vaso-constrictor agent named angiotonin (Page) or hypertensin (Braun-Mendenez). There seems little doubt that a wide variety of pathologic conditions which have in common a partial reduction of blood flow to one or both kidneys may cause permanent hypertension in man. Such conditions include narrowing of the mouths of renal arteries, aberrant renal arteries, various nephritides, chronic atrophic pyelitis, and hydronephrosis. These conditions probably represent the clinical counterpart of experimental renal hypertension. With respect to essential hypertension the causal relation to the kidneys is not wholly clear, but a concept of the mechanism and the part the kidney plays has been summarized recently by Shroeder (*Am. J. M. Sc.*, 204:734, 1942). Individ-

ual susceptibility, Shroeder points out, is an important factor in the development of essential hypertension. This susceptibility is usually declared by an excessive vascular response to emotional stimuli. This effect may be hereditary or the result of early environmental influence. Injection of epinephrin hydrochloride, he further points out, results in prolonged renal vaso-constriction. Psychic stimulation, or to put it another way, anxiety, can apparently do the same. The possibility, therefore, exists that often repeated or prolonged psychic stimulation in predisposed persons may cause a sufficient degree of renal ischemia to result in hypertension. Such hypertension would be temporary at first, but after a time might lead to permanent hypertension as a result of damaging the renal arterioles. Shroeder believes that the foregoing concept may account for the variations in the clinical course of hypertension so frequently observed.

There is little new with respect to the treatment of essential hypertension. Potassium sulfocyanate continues to enjoy considerable favor, despite occasional untoward effects. Further experience with extract of kidney tissue has yielded disappointing results. The technical difficulties in separating fractions which may have a specific physiologic effect are great; despite the fact that the normal kidney tends to counteract the hypertensive effect of a contralateral ischemic kidney, the results of treating hypertension by means of kidney extract seem to hold little promise at present. Tyrosinase apparently causes lowering of the blood pressure, but not by its enzymatic action. Further trial is warranted.

Antibody Function of Lymph Nodes. The year 1943 has seen crucial tests of the lymph gland theory of specific antibody production. For fifty years it has seemed logical to immunologists to assume that specific antibodies are formed as internal secretions by certain fixed tissues. As early as 1898 Pfeiffer had directed attention to lymphatic tissues as the probable source of antibodies, but the data were not generally considered proof of local specific antibody formation. It has remained for Ehrlich and Harris, of the Department of Pathology of the University of Pennsylvania School of Medicine, to produce substantiation of this theory. They selected the popliteal lymph node of rabbits as offering a unique opportunity for their study. This gland is the only lymph node draining the hind foot, and is supplied by afferent and efferent lymphatics of sufficient size for convenient aspiration. By means of injections of suspensions of formed antigen and subsequent collection with a tuberculin syringe, of samples of lymph from the afferent and efferent lymphatic vessels, they have been able to gather data to justify the conclusion that both hemolysins and agglutinins are formed within regional lymph nodes. They found that antibodies began to appear in the afferent lymphatic of the vaccinated node in titer increases of one hundred fold, often exceeding that of the blood serum. The local tissue proliferation was chiefly of the lymphatic type, from which they concluded that the lymphocytes are the major or perhaps the only local cells responsible for antibody synthesis.

Progress Among the Virus Diseases. While 1943 has not seen any significant advance in the therapy of virus diseases, it is none the less heartening to see the amount of research which is being carried on in this field. Vaccination against smallpox represents about the only available specific protection against a known virus disease, and the list of virus diseases is ominous and imposing. Sanders and Alexander (*J. Ex. Med.*, 77:71, January, 1943) have reported

the isolation and identification of a virus from the conjunctival scrapings from two patients suffering from epidemic keratoconjunctivitis. This disease, while not new, having been reported since 1890 in Austria, broke out during the summer of 1941 in the Hawaiian Islands among the armed forces and has now appeared in various parts of the United States. It is highly contagious and may leave permanent eye damage. Circular letter #14 of the office of the Surgeon General treats of this disease, so important has it become. The virus isolated by Sanders and Alexander proved to be pathogenic for mice, and it produced a mild but characteristic keratoconjunctivitis in a human volunteer. The serum contained specific antibodies for the virus one month after the infection.

Further studies by means of differential ultracentrifugation of infected monkey and chimpanzee stools by Melnick (*J. Ex. Med.*, 77:195, March, 1943) resulted in his obtaining the virus of epidemic poliomyelitis in purified and concentrated form. The virus so isolated caused poliomyelitis in monkeys and it appears that a sensitive method of detecting the virus has been found. A further report by Baker (*Science*, 96:475, Nov. 20, 1942) reports the isolation of a virus involved in a respiratory tract infection in cats, observed in the past year in the northeastern part of the United States. A number of instances of contact between sick cats and people who subsequently developed atypical pneumonia appeared. Complement-fixation tests have been made, but the results in both cats and man have been, so far, inconclusive. It is apparent, however, that this respiratory disease in cats is due to a virus in elementary bodies and that this virus is the same as, or cross-related to, the one causing at least some of the cases called atypical or virus pneumonia in man.

Finally, interesting indeed is the experimental work being done by Sprunt, of Duke University, to determine what dietary factors are essential to the multiplication of virus. The well known "lipotropic" effect of choline, preventing or curing fatty liver, and the effect of choline deficiency, producing in rats falling of hair, swelling of paws, along with signs of muscle weakness, suggested that this material might be of value in virus resistance. Thiamin chloride or Vitamin B₁ is also a contributing factor in the production of these fatty livers. Choline and thiamin seem to show an antagonism in such cases. That labile methyl groups serve a useful function is shown by the fact that methionine, a source of the labile methyl group, behaves like choline in the removal of some of the symptoms of so called dietary fatty livers. Betaine also shows similar detoxifying action.

Sprunt found that subcutaneous injections of methionine in rabbits increased their dermal resistance to experimental inoculation with vaccinia virus. Five rabbits receiving a daily dose of 300 mgs. of methionine for two days preceding, and five days following, injection with the virus showed a dermal resistance increased fourteen-fold, as compared with the resistance shown by the control rabbit. If the first methionine dose was delayed until immediately after the skin test, the calculated increase in resistance was ten-fold. Equally striking results were obtained with choline, given in 300-mg. doses at eight-hour intervals, two days before and for five days after the skin tests. The calculated dermal resistance to the choline series was nineteen-fold. Betaine caused a similar, but less pronounced, increase in resistance, the calculated ratio here being five-fold. Whether or not exposed mucous surfaces shared in this therapeutically in-

creased virus resistance has not yet been determined. Viruses other than poliomyelitis virus have not yet been tested. These researches are indeed promising, and the opportunities for research in the field of the viruses grow daily more numerous. The results promise benefit to mankind.

Poliomyelitis. The appearance again of poliomyelitis in almost epidemic proportions emphasizes anew the serious inadequacy of our knowledge of this dread disease. Indications are that 1943 was the worst year for this disease since 1940, when 9,770 cases were recorded. California, Texas, Oklahoma, and Connecticut appear to be the States most seriously affected. Most other parts of the country have been relatively unaffected with no more cases than would be expected.

The usual port of entry to the human body of poliomyelitis virus has not been precisely determined. The accumulated evidence suggests that the olfactory system is not as a rule primarily involved and that invasion generally occurs through the alimentary tract. The part of the canal most vulnerable to virus penetration, however, is still undetermined.

Faber and his colleagues, at California's Leland Stanford University (*Science*, 96:473, Nov. 20, 1942) have developed new evidence to suggest that the oropharyngeal surfaces are the commonest port of entry. They were unable to infect monkeys by the oral administration of massive doses of virus enclosed in capsules covered in a digestible fat. The same monkey resisted infection by a high enema containing the virus. Finally, some months later, the mouth of one of these monkeys, after zinc sulfate olfactory blockade, was sprayed on three successive days with 5 cc. of a virus-containing solution. Five days after the first spraying the usual symptoms of poliomyelitis occurred and the animal was sacrificed and the tissues studied. The lesions formed could all be explained on the assumption of a nerve-born infection entering through the oropharyngeal surfaces. Thus the mouth and the pharynx appear to be more vulnerable to penetration by this virus than the lower portion of the alimentary tract.

Progress in the search for extra-human sources of poliomyelitis has met with notable recent success. Work by Jungeblut and Dalldorf of Columbia University indicates that virus-infected rodents may be the source of outbreaks of human poliomyelitis. These observations may well constitute one of the most important contributions to the epidemiology of poliomyelitis of the present decade.

Five cases of poliomyelitis occurred during September and October, 1942, within a sharply circumscribed half square mile area in White Plains, N.Y. The cases occurred in rapid sequence and were the only cases of poliomyelitis reported in White Plains for over a year. Two of the cases were fatal. In the search for the extra-human sources of the epidemic, a dead gray house mouse was discovered in the basement of the home of one of the fatal cases. A second gray mouse was trapped in the same basement. Additional mice were trapped from the area of the epidemic. Ten per cent saline suspension of the glycerated brains of these mice was prepared and injected intracerebrally into white mice. Definite symptoms were observed in white mice injected with three suspensions: one prepared from the dead mouse, one from the trapped mouse in the same house, and one from another mouse trapped in the immediate neighborhood.

The disease in the infected mice resembled in all respects the clinical picture of "rodent poliomyelitis" as previously described. The infection

thus far has been propagated through twelve serial passages from these fatal cases. The serums from two of the three local convalescent patients neutralized the virus in vitro. From such evidence it is concluded that the dead and trapped mice were presumably suffering from the same virus infection as the human patients.

Appropriate material from the brains and cords of two fatal cases has produced a prostrating paralysis with typical lesions in one monkey. The cord material from the monkey caused death in a rat on the twentieth day, from which point on it could be transmitted to rats or mice, either by intracerebral or intraperitoneal injections. This passage virus was neutralized with poliomyelitis hyper-immune horse serum, and also with the three convalescent human serums from surviving patients. The viruses isolated from the dead mouse and the fatal human cases are therefore apparently identical in specificity. This marks the first time that a probable extra-human source of human poliomyelitis has been supported by experimental evidence.

Progress Report on Penicillin. Penicillin was discovered by Fleming in London in 1929. It is the name applied to the powerful antibacterial substance contained in the filtrates of broth cultures of the mold, *Penicillium notatum*. It has now been obtained in crystalline form, but only partially purified, representing only about 10 to 15 per cent pure penicillin. Its formula is probably $C_{14}H_{18}NO_6$ or $C_{14}H_{17}NO_6$ and H_2O . (Dawson, H. and others in *J. Bact.* 45:65, Jan. 1943.)

The first information concerning its unique therapeutic possibilities was revealed in the publications of Florey, Chain, and other collaborators of Oxford. Professor Florey visited this country in the summer of 1941 at the invitation of the Rockefeller Foundation and together with his colleague, Heathey, he proceeded to the Northern Regional Laboratory of the U.S. Department of Agriculture at Peoria, Ill., where studies were at once initiated by Dr. R. D. Coghill and Dr. A. J. Moyer on the cultural characteristics of *Penicillium notatum* and on methods of purification. The studies have been of great value to those who are undertaking the production of penicillin.

Returning from Peoria, Florey consulted with several commercial companies in the hope that they might undertake production developments. His efforts in that direction were supported by encouragement from the Committee on Medical Research and the National Research Council. In a statement issued by Dr. A. N. Richards, Chairman of the Committee, on May 22, 1943, it is revealed that in early autumn, 1941, research looking toward production was begun in several commercial laboratories in this country and has continued so that today some sixteen companies are engaged in or intend to become engaged in the production of penicillin.

This report further points out that the difficulties confronting large-scale production arise from the fact that in the metabolism of the mold only very minute amounts of penicillin are formed and those only after days of growth. A yield of as much as one gram of purified product from 20 liters of culture fluid would be regarded as exceptionally high.

The first clinical tests of penicillin in this country were reported by Dawson of Columbia in 1941. In June, 1942, the Committee on Chemotherapeutic and Other Agents of the National Research Council, under the Chairmanship of Dr. Chester S. Keefer, was invited to organize and supervise clinical investigation in selected hospitals, the records

to be coordinated by Dr. Keefer and his committee. The costs of these studies are provided by contract with Office of Scientific Research and Development, recommended by the Committee of Medical Research.

The first report of this committee, summarizing its experience with the use of penicillin in the treatment of 500 cases of various infections, has appeared in the *Journal of the American Medical Association* for Aug. 28, 1943. All of these cases have been treated by 22 groups of clinical investigators, scattered over the entire United States, accredited to the Committee, and the results of treatment have been collected and summarized by the chairman of the Committee. This unique effort is a tribute to cooperative scientific endeavor, and was initiated and is being continued as a phase of the war effort directed primarily toward the benefit of our armed forces. The conclusions from the study are of general interest and are as follows:

Penicillin is a remarkably potent antibacterial agent which can be given intravenously, intramuscularly or topically. It is ineffective when given by mouth.

Following intravenous or intramuscular injection it is excreted rapidly in the urine, so that in order to obtain an adequate amount of potent material in the circulating blood and tissues it is necessary to inject penicillin continuously or at frequent intervals; that is, every three or four hours.

Penicillin has been found to be most effective in the treatment of staphylococci, gonococci, pneumococci and hemolytic streptococci infections. It has been disappointing in the treatment of bacterial endocarditis. Its effect is particularly striking in sulfonamide resistant gonococci infections.

While the dosage schedule requires additional investigation, it seems clear that the average patient requiring intravenous or intramuscular injections for serious staphylococci infections requires a total of between 500,000 and 1,000,000 Oxford units, and the best results have been observed when treatment is continued for at least ten days to two weeks. At least 10,000 units should be given every two to three hours at the beginning of treatment, either by continuous intravenous injection or by interrupted intravenous or intramuscular injections.

Satisfactory results are obtained in sulfonamide-resistant cases of gonorrhea following the injection of 100,000 to 160,000 units over a period of forty-eight hours.

Patients with pneumococci pneumonia frequently recover following the use of 100,000 units given over a period of three days. This is especially important in sulfonamide-resistant pneumococci infections. It may be necessary to give between 60,000 and 90,000 Oxford units daily for four to seven days to get a maximum effect.

In the treatment of empyema or meningitis it is advisable to use penicillin topically by injecting it directly into the pleural cavity or the subarachnoid space.

Toxic effects are extremely rare. Occasional chills with fever, or headache and flushing of the face have been noted. Urticaria has been reported and thrombophlebitis at the site of injection has been described.

See BIRTH CONTROL; DENTISTRY; PSYCHIATRY; PSYCHOLOGY under *Psychodietetics and Rehabilitation*. For leading causes of death, see VITAL STATISTICS. For manufacture of drugs, and use of narcotic drugs, see CHEMICAL INDUSTRIES; CHEMISTRY under *Drugs*; FOOD AND DRUG ADMINISTRATION; NARCOTIC DRUGS CONTROL. See the articles on government agencies active in health work, as CHILDREN'S BUREAU, COORDINATOR OF INTER-AMERICAN AFFAIRS, FEDERAL SECURITY AGENCY, PUBLIC HEALTH SERVICE, VOCATIONAL REHABILITATION, OFFICE OF, VETERANS' ADMINISTRATION; and private organizations, such as RED CROSS, ROCKEFELLER FOUNDATION, medical groups listed under PHILANTHROPY and SOCIETIES. See also ACCIDENTS; LAW under *Legal Education*; PRISONS.

W. H. POTTS.

MEDITERRANEAN COMMISSION. See GREAT BRITAIN and ITALY under *History*.

MELLON INSTITUTE. The aim of Mellon Institute is the creation of new knowledge by scientific investigation, in accordance with the institution's definite

fellowship system. According to this procedure the researches are restricted to major problems of the pure and applied sciences and particularly chemistry—problems that require protracted periods of time for solution by specialists. The Institute was founded by Andrew W. Mellon and Richard B. Mellon in 1913 and is located at 4400 Fifth Avenue, Pittsburgh, Pa.

The industrial research of the Institute is organized on a contract basis, the problem being set by a person, firm, or association interested in its solution, the scientific worker being found and engaged by the Institute, and an industrial fellowship being assigned for a period of at least a year. Each holder of an industrial fellowship is given broad facilities for accomplishing the research entrusted to him and all results belong exclusively to the donor of the fellowship. Only one investigation is conducted on a specific subject at any one time and hence there is no duplication of the research activities of the fellowships in operation. At present there are 100 of these industrial fellowships, which employ 425 scientists and engineers. The projects range from powder metallurgy and refractories to novel pharmaceuticals or medicinal agents, synthetic rubber, new plastics and textiles, and improvements in foods and other essential commodities. Practically all the work during wartime relates to urgent military problems. The Institute's department of research in pure chemistry is concentrating on the synthesis of antimalarials.

MEMEL. A German territory on the east coast of the Baltic, created an autonomous district under Lithuanian sovereignty by the Memel Statute of May 8, 1924, and ceded by Lithuania to Germany on Mar. 23, 1939 (see *YEAR BOOK* for 1939, pp. 473-474). Area, 1,092 square miles; population on Jan. 1, 1940, 155,000. See GERMANY.

MENG CHIANG. See MONGOLIA under *Inner Mongolia*.

MENINGITIS. See PUBLIC HEALTH SERVICE.

MENNONITES. A religious group founded in Switzerland in 1525 in protest against ecclesiastical rule and rigid liturgy. In the United States the Mennonites first settled at Germantown, Pa., in 1683, ultimately dividing into 17 bodies. For statistics, see RELIGIOUS ORGANIZATIONS.

MENTAL DISEASE. See PSYCHIATRY; PSYCHOLOGY; PUBLIC HEALTH SERVICE.

MERCHANT MARINE. See MARITIME COMMISSION; SHIPBUILDING; SHIPPING. For *Merchant Marine Council*, see COAST GUARD.

MERCURY (Quicksilver). Contrasting sharply with its status at the outbreak of war, when mercury was the only strategic metal in which the Axis held production dominance, by the end of 1943 supplies available to the United States had become so plentiful that the War Production Board was able to relax materially its restrictions on use and, on Feb. 2, 1944, cancel them altogether.

Domestic production came largely from the older, larger mines in the Pacific Coast States, many of the new producers brought into production by the soaring price of mercury the previous year having fallen by the wayside. The New Idria mine in central California, a producer for the past century, was the country's largest. California mines contributed over 60 per cent of domestic production. Oregon dropped close to the common level of Idaho, Nevada, and Texas. Some production came from Arkansas, Alaska, and Arizona. United States

output was 53,500 76-lbs. flasks; Mexico produced about 25,000 flasks; Canada nearly 20,000 flasks; and Peru, Chile, and Venezuela, minor amounts. In 1942, United States production was 50,846 flasks. Recently developed mines in British Columbia, Mexico, and Idaho were the only large newcomers on the production list. No production information is available on Spain's Almaden Mine, world's largest prewar mine, or Italy, normally the second largest world producer. It is understood, however, that much of the Spanish output went to Great Britain.

As in former years, over 50 per cent of consumption was for industrial chemicals, principally for medicine and paint. The next most important use was for production of mercuric fulminate for detonating explosives. This use, insofar as ammunition is concerned, has dropped greatly since the last war, being replaced by lead azide, which deteriorates less rapidly. On Sept. 9, 1943, the WPB amended Conservation.

The OPA ceiling price of \$191 per 76-lb. flask, f.o.b. Pacific Coast shipping points, set in 1942, continued in effect. Sales were reported at a somewhat lower figure as abundance of the metal grew, and by February, 1944, West Coast mines offered to sell as low as \$125 per flask. Mines whose April, 1942, production was less than 90 flasks were, during 1943, afforded a price floor by Metals Reserve Co. contracts carrying a price of \$192 per flask, f.o.b. New York. These contracts were cancelled effective Jan. 31, 1944. For 1944, the WPB announced that domestic production and imports for both private and government purchase each are to be reduced to 70 per cent of 1943 levels as a means of conserving manpower, materials, and equipment. No financial and priority assistance is to be given new producers.

Heavy Russian requirements were supplied by the United States in 1943, and a substantial American stockpile accumulated. See GEOLOGICAL SURVEY.

CHARLES T. POST.

MESSERSCHMITT PLANES. See AERONAUTICS under *Axis Types*.

METALS, METALLURGY. See topics listed under MINERALS AND METALS. For Metals Reserve Company, see RECONSTRUCTION FINANCE CORPORATION; also, BERYLLIUM; CHILE under *History*; CHROMIUM; MANGANESE; MERCURY; TUNGSTEN; ZINC.

METEOROLOGY. Among the notable events of the year were airplane flights through two tropical hurricanes made by officers of the Army Air Corps.

Flights through the storm of July 25-28 were made from the Instructor's School at Bryan Field, Texas. On the first flight Col. Joseph P. Duckworth was accompanied by 2d Lt. Ralph M. O'Hair, navigator, and on the second trip by 1st Lt. William H. Jones-Burdick, a pilot weather officer. This is the first time that a plane has been intentionally flown through the center of a hurricane. The flights were made at altitudes between 4,000 and 9,000 feet. The following is quoted from Colonel Duckworth's report:

As we broke into the "eye" of the storm we were, of course, contact, and could see the sun and the ground. Apparently the "eye" was like a leaning cone as observation of the ground showed a considerable ground wind.

On the whole, neither flight through the hurricane was as uncomfortable as a good, rough thunderstorm. Rain had been encountered in thunderstorms which was heavier than the rain in the hurricane, to say nothing of much more severe drafts and choppy and bumpy air.

Later in the season observations were reported by Capt. Gordon H. MacDougall, Army Air Corps, during two flights through the hurricane of August 20-26. These flights were made from the island of Antigua, British West Indies, during the morning hours of the 20th and 21st of August. Various meteorological elements were observed and excellent cloud and swell observations were obtained.

Sea conditions observed within the storm area are described in this excerpt from his report:

For those of us who had spent enough time in the Caribbean to be familiar with the magnitude of the waves usually encountered, it was hard to believe what we saw below. The seas were tremendous and the crests were being blown off in long swirls by a wind that must easily have exceeded 70 miles per hour. The long parallel streaks of foam streaming from one wave to another made it evident from which direction the wind was blowing.

Captain MacDougall reported that after pictures were taken an examination of the camera lens showed a salt residue from water droplets deposited at 1,000 feet.

The fact that it is possible to fly modern airplanes through tropical hurricanes will encourage similar missions in the future and will give meteorologists a wealth of direct upper air observations with which to perfect knowledge of the cause and behavior of these destructive storms.

The U.S. Weather Bureau. Because of the war the activities of the Weather Bureau were considerably expanded. Expenditures for the fiscal year 1943 were \$11,616,938 as compared with \$8,668,632 in 1942. On June 30, 1943, the Weather Bureau had 3,357 full time employees, an increase of 767 in twelve months. Not only has the number of employees increased but there has also been a change caused by the employment of a large number of women. Prior to Pearl Harbor the making of weather observations was, in the main, considered a young man's work since it required physical activity and considerable exposure to the weather at all seasons of the year. On Dec. 7, 1941, the Bureau had only two women weather observers; by the middle of 1943 there were nearly 700 women engaged in observational work.

Meteorological Instruments. The development of a practical method for measuring ceiling heights during the daytime by means of a modulated light beam and appropriate detector and recording equipment has been completed. This apparatus provides a reliable means of determining cloud heights throughout the entire day, and makes available for the first time a permanent automatic record of ceiling heights.

A new anemometer has been developed for the measurement of wind speed. The advantages of this instrument over previous designs are the practical elimination of drag due to friction and the absence of mechanical contacts in the electrical circuit permitting the indicating meter to follow the speed of the cups more closely and rapidly, thus increasing the accuracy in the measurement of wind fluctuations and speed. The unit is relatively simple and requires a minimum of adjustment.

An improved method for the measuring of water vapor in the atmosphere has been perfected. This device employs spectroscopic means and is superior to other methods in that it is possible to measure an integrated value throughout a mass of air rather than measuring a point sample; it also provides a means for accurately measuring water vapor at a low temperature.

Inter-American Meteorological Training School. On Feb. 23, 1943, the Inter-American Meteorological

Training School was opened at Medellin, Colombia. It is conducted by the Weather Bureau in cooperation with the Division of Cultural Relations of the State Department, the Office of the Coordinator of Inter-American Affairs, and the Defense Supplies Corporation (q.v.). Every Latin-American republic is represented in the total of 192 students. In the curriculum emphasis is placed upon fundamental meteorological studies, thorough training in observational techniques, and the English language. Instruction is also given in the construction and analysis of synoptic weather maps and in mathematics, physics, and climatology. An interesting feature of the school is the part taken in the instruction work by Latin-American instructors who are especially qualified in their respective fields. A number of the students are being selected for advanced training at universities in the United States. It is felt by officials that the benefits of this training will exercise an important influence on the development of meteorology and climatology in this hemisphere and react favorably on the exchange of meteorological information needed by American interests.

See AGRICULTURE under *Production*; COMETS; EARTHQUAKES; FLOODS; HURRICANES; WEATHER BUREAU. For weather reports, see CENSORSHIP, OFFICE OF. For determination of cloud heights, see ILLUMINATION.

RICHMOND T. ZOCH.

METHODIST CHURCH. On Aug. 26, 1943, the Supreme Court of South Carolina decided (1) that the Plan of Union, which united the Methodist Episcopal Church, South, with the Methodist Episcopal and Methodist Protestant Churches in 1939 was valid, and (2) that the Methodist Church had no exclusive right to the old name "Methodist Episcopal Church, South."

In February, 1943, the Council of Bishops, meeting in Washington, D.C., planned a Crusade for a New World Order embodying Christian principles, economic, social, and racial. Elaborate preparations have been made. Bishop Oxnham of Boston is chairman of the Committee in charge.

Final returns of Methodist population for 1943 are not yet available. A recent tabulation gives the church 24,176 ministers (aside from local preachers), serving 42,000 congregations on 21,031 pastoral charges. Sunday school enrollment, still declining, was 5,093,588. Adults baptized numbered 143,314; children 124,104. Active members were 6,240,424, a gain of 80,829. Adding nonresident members (1,173,467) gives a total membership in the United States of 7,713,891. Foreign membership is probably under half a million. In July the Statistical Office was removed to 740 Rush St., Chicago, and Director T. P. Potter was succeeded by Albert C. Hoover.

Methodist Church finance took an upturn. Everywhere local church debts were being reduced or cleared. Contributions for ministerial support reached \$35,342,941, and World Service offerings, "Benevolences," rose 11.6 per cent to \$4,384,686. For other local church expenses \$43,698,423 was collected. For Overseas Relief in the year closing May 31, \$464,049 came in, and in the six months ensuing \$306,350 was added. Total for war emergency giving for 18 months was about \$2,000,000. Receipts for the Episcopal Fund were \$720,588, the largest ever. For Administrative expenses the total was \$160,220. The Commission on World Service and Finance received \$4,659,830, an increase of \$492,650. Sixty per cent of this went to the Board of Missions and Church

Extension, 14.55 per cent to the Board of Education, and the remaining one-fourth to ten other Methodist agencies. The Missions' share was divided in the ratio of 56 per cent Foreign to 44 per cent Home. Sales of the Methodist Publishing House totaled \$6,326,144, the largest in a century and a half, its Abingdon-Cokesbury general religious books sharing popular favor with the Sunday School periodicals, and the *Christian Advocate* (circulation 250,000 weekly). Assets of the house are about eight millions; from the "produce" a dividend of \$250,000 is distributable to the retired ministers, and similar amounts are applicable to debt-reduction and new equipment. In the fiscal year pensions amounting to \$3,842,639 were paid to 12,868 ministerial beneficiaries, income resulting from collections and from endowments aggregating \$29,611,387.

While the government publishes no statistics regarding chaplaincies, now it may be told that the 1,000th Methodist minister has been accepted for the Army and the 300th for the Navy. This, however, does not exhaust the Methodist quota.

Delegates, lay and clerical in equal numbers, are being elected by the Annual Conferences to the second General Conference of the Methodist Church which meets in Kansas City, Mo., for about ten days, beginning Apr. 26, 1944. Pending legislative proposals relate to the election and interchange of bishops; to the functions of the six Jurisdictional Conferences, which the Plan of Union grafted into the constitution, and which some characterize as "a fifth wheel"; and to the racial problem, especially the Central Jurisdiction, which includes virtually all of what Methodists call "the colored work." Bishops, Editors, Board secretaries, Publishing Agents, and other General Officers are now chosen by the Jurisdictional Conferences, which meet next summer, or by the respective Boards and Commissions.

Notable visitors from the "world parish" of Wesley were Madame Chiang Kai-shek of China, who visited her old school, Wesleyan College, Macon, Ga., and who took home with her a love-gift of \$50,000 from thousands of American fellow Methodists for the war-orphans of China; Rt. Hon. Isaac Foot of Plymouth, England, and the Rev. Walter J. Noble, ex-President of the British Methodist Church. Both addressed large gatherings throughout the country.

Though the Japanese Empire and its overrun territory is sealed against Christian missions the Methodist Division of Foreign Missions had an active and fruitful year. Increased receipts for World Service and from the Week of Dedication enabled it to bear the emergency cost of war dislocations, to repatriate many of its workers, to pay off its burdensome debt, and to help the churches and schools of China to carry on. Secretary Diefendorfer was the prime mover in the timely Study Conference on the Bases of a New World Order, in which select group of 250 persons met at Ohio Wesleyan University, Delaware, Ohio. Another advance step is the setting up of the Collins Pension Fund for Missionaries, to which the bequest of the late Everell Collins, lumberman, of Portland, Ore., has been assigned. It will probably yield three million dollars. Mission work continues vigorously in India, Central and South Africa, and Latin America. Total receipts of the Division were \$2,327,012. Permanent Funds gained \$83,306, making the aggregate \$4,742,561.

The Methodist Church reports 9 universities, 10 schools of theology, 69 colleges, 27 junior colleges, 18 secondary schools, and 2 training schools.

Though the war has brought difficulties, no school has been compelled to suspend. Over 20,000 alumni are in the armed service. Twenty institutions are cooperating with the Army and Navy training programs, receiving about 15,000 trainees. A bequest of Walter Murphy adds \$20,000,000 to the endowment of Northwestern University.

There are 77 Methodist hospitals with 13,248 beds, which cared for 636,438 patients in the year; 6,847 homeless children found shelter in 56 Methodist Homes, and 3,777 old folks found refuge in Methodist Homes for the Aged. The 24 homes for workers housed 1,865 young men and women. The value of property and endowments is \$91,854,000.

Bishop H. Lester Smith, of Cincinnati, Ohio, is president of the Council of Bishops for 1944, and Bishop G. Bromley Oxnam of Boston (518 Boylston St.), Secretary. Bishop Adna W. Leonard (68) of Washington Area, Chairman of the General Commission of Army and Navy Chaplains, was killed in the crash of an Army plane in Iceland, May 3, while on tour of visitation of overseas chaplains. Bishop E. H. Hughes administers Washington Area *pro tem* and Bishop Peele heads the Methodist Committee on chaplains.

MEXICO. A Federal republic of North America, comprising 28 States, 2 Territories, and the Federal District (City of Mexico and 11 surrounding villages). Capital, Mexico, D.F.

Area and Population. Area, 758,258 square miles; population, 19,653,552 in 1942 (16,552,722 at 1930 census). Preliminary vital statistics for 1940: Births, 850,367; deaths, 456,295; marriages, 146,959; immigrants, 167,161; emigrants, 150,509. The racial division of the 1930 population was: Indians, 4,620,880; whites, 2,444,466; mixed, 9,040,590; of unknown origin, 140,094; foreigners, 159,876. The language of the country is Spanish, but about 3,000,000 Indians use native Indian languages exclusively or by preference. The 1940 populations of the chief cities were: Mexico, D.F., 1,464,556; Guadalajara, 228,049; Monterrey, 180,942; Puebla, 137,324; Mérida, 98,334; León, 86,089; Tampico, 81,334; Aguascalientes, 81,124; San Luis Potosí, 78,042; Torreón, 76,613; Veracruz, 70,958; Chihuahua, 57,456; Pachuca, 52,387.

Defense. As of May, 1942, Mexico had a regular army of 70,000 men, a small air force with 100 or more planes, and 65,000 trained army reserves. In addition some 20,000 industrial workers and about 300,000 farmers had received some military training. The Navy consisted of three 2,000-ton gunboats armed with 4.7-inch guns, 11 armored coastal patrol vessels, and one heavy transport.

The decree of Aug. 11, 1942, ordered compulsory military training for all able-bodied men from 18 to 45 years of age. Under this program, an estimated 1,000,000 men still in their civilian occupations were receiving part-time military instruction from army officers outside of working hours. Only 10,000 youths in the 18-year-old class were actually called to the colors during the first seven months of 1943, due to the lack of equipment. Under the lend-lease agreement signed Mar. 27, 1942, and amplified Mar. 18, 1943, the U.S. Government undertook to supply Mexico progressively with arms and equipment for between 1,000,000 and 1,500,000 men. Only a small part of this material was delivered during 1942-43. According to a statement by the Minister of Defense on Apr. 5, 1943, the contemplated reorganization and expansion of the army would require five years. A joint Mexico-United States Defense Commission

was established in January, 1942, to coordinate their defense measures (see 1943 YEAR BOOK, p. 410).

Education and Religion. The illiteracy rate was estimated at 45 per cent in 1940. Primary education is free and nominally compulsory up to 15 years of age. According to the President's message of Sept. 1, 1942, there were in the republic's 390 school zones (excluding the Federal District) a total of 12,000 rural schools, 211 demonstration schools, 20 frontier schools, 42 model schools, 391 day and 28 night schools for adults, and 1,054 schools maintained by industrial enterprises for children of their laborers. Registration in these schools in 1941 totaled 1,030,000 pupils. In addition there were 240,000 pupils in public schools and 21,000 in private schools in the Federal District. There are nine universities.

Roman Catholicism is professed by over 90 per cent of the population. The 1917 Constitution established State control of all churches. All foreign priests were expelled in 1926. In 1936 all buildings used for religious purposes were nationalized and the number of native priests permitted to officiate was reduced to about 350. In subsequent years a number of State governments permitted many churches to reopen. The breach between the Federal Government and the Catholic Church appeared to have been healed in 1942 when the Church ordered loyal cooperation with the Government in the prosecution of the war (see 1943 YEAR BOOK, p. 411).

Production. Mexico is primarily an agricultural country, with 65 per cent of the population living from the soil. The principal crops, with estimated 1942 production figures in metric tons, were: Corn, 2,356,000; wheat, 430,000; chickpeas, 77,492; beans, over 180,000; unhusked rice, 130,000; peanuts, over 20,000; coffee, 57,000 (see COFFEE). The 1942 cotton crop was 104,420 tons; henequen (Yucatan Peninsula), 550,000 bales. Production of refined sugar in 1943 was estimated at 454,148 short tons; of native brown sugar, 110,230 tons. About 2,000,000 cattle are produced annually and about 450,000 head exported to the United States. Chicle production in 1943-44 was scheduled at 9,170,359 kilos. Rubber production, 1941, was about 5,200 metric tons. Cocoa beans, peas, bananas, tomatoes, and vegetables are other crops.

The petroleum wells, state-owned since 1938, produced 32,955,000 bbl. of oil in 1942 (41,160,000 in 1941). Other mineral production in 1941 was (metric tons): Copper, 48,716; zinc, 154,996; lead, 155,258; coal, 855,696; antimony, 11,131; graphite, 16,928; arsenic, 12,844; silver, 2,437. The gold output in 1941 was 24,822 kilograms. According to the 1940 census, there were 12,711 industrial establishments with 332,000 employees and an invested capital aggregating some \$520,000,000. Textiles, shoes, wheat products, beer, sugar, vegetable oils, alcohol, cement, bricks, iron, paper, etc., are the leading manufactured products. During 1942, 60 new industrial plants with a nominal capital of \$38,000,000 were established, many of them by United States corporations (see 1943 YEAR BOOK, p. 409).

Foreign Trade. Imports in 1942 totaled \$155,001,000 (\$188,274,000 in 1941); exports, \$194,878,000 (\$150,298,000). Silver and gold accounted for \$56,800,000 of the 1942 exports (\$44,527,000 in 1941). Visible imports exceeded exports in 1941 for the first time in this century, but the normal favorable trade balance was restored in 1942. In round numbers, the United States supplied imports to the value of \$147,000,000 in 1942 (\$159,000,-

000 in 1941) and took exports in 1942 valued at \$179,000,000, including \$27,000,000 of silver and \$40,000,000 of gold (\$141,000,000 in 1941, including silver valued at \$26,000,000 and gold valued at \$17,000,000).

The value of the principal 1941 exports (in pesos worth \$0.2058) was: Silver bars, 106,179,000; copper bars, 70,026,000; lead bars, 37,015,000; henequen, 33,043,000; zinc concentrates, 29,342,000; crude petroleum, 29,299,000; coffee, 28,799,000; gold bars, 28,382,000; chicle, 25,143,000; cattle, 23,475,000.

Finance. Budget expenditures for 1943 were fixed by Congress at 707,845,000 pesos, which the President, using his emergency war powers, increased by 105,672,400 pesos. Actual receipts in 1942 were 631,000,000 pesos and expenditures 667,000,000 pesos (119,000,000 pesos for defense).

The bonded (foreign) public debt is estimated at 185,000,000 pounds sterling; the internal and floating debt was 354,000,000 pesos in 1940. The average free market exchange rate of the Mexican peso was \$0.2054 in 1941 and \$0.2057 in 1942.

Transportation. The National Railways of Mexico (nationalized in 1937) had 13,864 miles of line in operation in 1942. For the year ended Aug. 31, 1942, gross income of the National Railways was 236,106,974 pesos and disbursements 216,083,961 pesos. A new international bridge over the Suchiate River, linking the terminus of the Mexican National Railways at Suchiate with the northern terminus of the International Railways of Central America at Ayutla, Guatemala, was opened Nov. 1, 1942. United States aid in the rehabilitation of the National Railways was extended under accords signed Apr. 7, 1942 (see 1943 YEAR BOOK, p. 409). The highway mileage on Jan. 1, 1941, was 56,923. About 30,000 automobiles carried an estimated 95,000 tourists from the United States to Mexico City in 1941. The network of Federal highways increased to nearly 7,000 miles in 1942. Work was rushed on the section of the Pan American Highway from Mexico, D.F., to the Guatemalan border. Various other important road projects were under construction, including a 424-mile highway connecting Torreon and Durango with the Pacific port of Mazatlan. Over 20 air lines provide services between the chief towns and to the other American countries. Veracruz and Tampico are the chief ports. Steam, motor, and sailing vessels entering and clearing the ports in 1940 numbered 10,363 of 5,683,391 gross tons.

Government. The Constitution of 1917, as amended in 1929 and 1933, vests executive power in a President elected by direct popular vote for six years and ineligible for reelection. Legislative power rests with an elective Congress of two houses—a Chamber of Deputies of 171 members chosen for three years and a Senate of 53 members renewed every six years. President in 1943, Gen. Manuel Avila Camacho, who assumed office Dec. 1, 1940. Predominant political power has been exercised since 1928 by the National Revolutionary party, organized by President Plutarco Elias Calles, and its successor, the Party of the Mexican Revolution (PRM), formed at the direction of President Lázaro Cárdenas in 1938. For 1943 developments, see below.

HISTORY

Mexico at War. Mexico's principal contribution to the United Nations' war effort during 1943 was in supplying minerals and other strategic materials to United States war industries. In addition, the Government extended and improved the measures

taken during 1942 (see 1943 YEAR BOOK) to place the nation on a war footing, to assist United States and Central American forces in guarding and patrolling frontier and coastal areas, to protect vital factories, communications, and other internal installations against sabotage, and to exercise vigilance over resident foreigners.

War Minister Lazaro Cárdenas admitted on February 4 that there had been some opposition to the compulsory military service system which went into force Aug. 18, 1942. He said the authorities had "launched a campaign of orientation" to explain the need for military conscription and the aims of subversive elements who were fighting it. As a result, he said, the people were fully collaborating with the Government. Mgr. Luis Maria Martínez, Roman Catholic Archbishop of Mexico, placed the full support of the church behind the compulsory service law and the war effort in a statement issued February 27. To prevent 18-year-old youths from evading military service by marriage, the War Ministry on March 22 announced that no soldier in that class would be permitted to marry during his period of service.

The Government experienced even greater difficulty in its efforts to overcome the strong opposition to sending Mexican troops overseas. On April 30 the first sample poll was taken in Mexico City by the newly created Mexican Institute of Public Opinion. It showed that the majority of Mexicans in the capital favored direct participation in the war "only if Mexican national territory is attacked by the Axis nations." The majority also wanted "energetic measures to combat fifth columnists," further efforts to strengthen national unity, and stricter control of prices to check the rising cost of living.

In line with prevailing sentiment, President Avila Camacho on February 21 stated that Mexico would not send troops overseas. But a series of subsequent statements prepared public opinion for a reversal of this stand. In a radio speech on May 29 the President said Mexican troops were ready to join United Nations fighting men whenever needed. On November 16 he announced that the Government would send troops abroad "if our Allies have sound reasons to ask us" but that in such an eventuality the Mexican force would expect "a defined war sector, no matter how limited, controlled by our command and under our flag." He indicated to a special committee of the Senate on December 6 that an expeditionary force would be sent to fight along side of U.S. forces in the Pacific if an official request was received from the United Nations. Two days later the President's brother, Gen. Maximino Avila Camacho, Minister of Communications, in a newspaper interview declared an expeditionary force unnecessary and denounced as "demagogic" the leftist groups espousing direct participation in the fighting. Those favoring direct participation felt that Mexico could not hope for a voice in the peace conference without taking a more active part.

United States Relations. Opposition to sending Mexicans to fight overseas arose in part from the traditional Mexican distrust and hostility toward the United States. This sentiment was further inflamed during 1943 by the serious hardships imposed by the rising cost of living, attributed by the uneducated to the Government's economic collaboration with the United States. Pro-Axis elements conducted a persistent campaign seeking to obstruct and sabotage Mexican-United States friendship and collaboration. Much resentment was aroused in Mexico by the clashes in Los Angeles in June

between members of the U.S. armed forces and "zoot-suiters" of Mexican blood. Four hundred students demonstrated in Mexico City on June 25 in protest against these incidents.

Discrimination in some localities of the United States against Mexican laborers sent to work on American farms and railways under agreements made by the U.S. and Mexican Governments was another sore point. Another such agreement for the temporary migration of Mexican maintenance-of-way laborers for work on Southwestern U.S. railways was announced on May 1. However on August 4 the Labor Ministry announced that no more laborers would be sent to the United States, as the agreements between the two Governments had been fulfilled. Under these agreements 37,946 farm workers and 13,303 railroad workers had been sent to 14 States. Discrimination against Mexican workers in Texas led Foreign Minister Ezequiel Padilla in July to inform the Governor of Texas that Mexico would not permit the migration of laborers to harvest Texas crops unless the State authorities gave guarantees of proper treatment.

The Mexican and U.S. Governments did not permit these relatively minor obstructions to impair the close cooperation that had developed since 1941 (see previous YEAR BOOKS). In his annual message to Congress on September 1, President Avila Camacho said that Mexican-United States relations had "never before reached the high quality that at present characterizes them." New accords of a political and economic nature concluded during 1943 bore out his statement.

Meeting of Presidents. Through notes exchanged on January 22 the two Governments agreed on reciprocity of treatment for nationals residing in either country with respect to military service. On April 20 President Roosevelt journeyed to Monterrey, Mexico, for conferences with President Avila Camacho and other high Mexican officials. In his prepared address at Monterrey, President Roosevelt said that the two governments "recognize a mutual interdependence of our joint resources" and "know that the day of the exploitation of the resources and the peoples of one country for the benefit of any group in another country is definitely over." The following day President Avila Camacho and his entourage accompanied their American visitors to the Corpus Christi, Tex., naval air training station, where some Mexican cadets were receiving training.

One result of the meeting of the two Presidents was the creation on April 29 of a joint Commission for Economic Cooperation to study cooperative measures needed to deal with the Mexican economic crisis, which threatened to curtail output of strategic materials needed by the United States. This commission convened in Washington May 21 and after investigations there and in Mexico City submitted its report and recommendations on July 17.

The report stated that the U.S. Government would make available the supplies, equipment, and repair and replacement parts necessary for the production of strategic materials and expansion of food production in Mexico. The Commission recommended U.S. cooperation in the orderly development of the electrical, steel, rubber, cement, chemical, textile, sugar and alcohol, and pulp and paper industries; revisions in U.S. undertakings to supply general commodities to Mexico in accordance with changed economic conditions; the immediate execution of certain drainage, flood-control, and sanitation projects; and various measures calculated to maintain and increase Mexico's trans-

portation facilities, including the establishment in Washington of a permanent mechanism for effective and continuous cooperation with Mexican transportation authorities.

One recommendation called for the creation of a Mexican-American Industrial Commission to carry forward long-term programs for the industrialization of Mexico. This was approved by the Mexican Government and the six members (three Mexicans and three Americans) met for the first time in Mexico City September 20 to begin their labors. The 1941 monetary stabilization agreement between the two Governments was renewed on June 3. Due to the acute currency shortage in Mexico, export of silver to the United States was suspended in May, but on December 27 it was announced that the ban would be lifted on Apr. 1, 1944.

For the first time in the history of U.S.-Mexican relations, the Chief of Staff of the U.S. Army visited the Mexican capital at the invitation of the Government to witness the annual independence day ceremonies on September 15.

Economic Measures. The basic cause of the economic boom and inflation in Mexico was the highly favorable trade balance with the United States. Due to the war, American industry was unable to furnish manufactured goods in return for heavy shipments of minerals and agricultural products from Mexico. During 1942 Mexican exports to the United States surpassed imports from that country by \$50,000,000, and this trend continued during 1943. This accumulation of credits in Mexico was increased by an influx of investment capital from the United States seeking higher returns or escape from war taxation. Currency in circulation rose to unprecedented levels while consumer goods became scarcer, producing a steady rise in the cost of living. This rise in living costs bore heavily upon the peasants, wage-earners, and white collar workers comprising the great bulk of the population, while industrialists, business-men, landowners, and mining companies experienced exceptional prosperity.

The Government took various steps to curb the menacing inflation. Taxes on corporations and on some consumer articles were raised in January. A government "consortium" established in March was authorized to control prices, stocks, transportation, and distribution of articles of primary consumption. Export control measures were adopted. In mid-April the Bank of Mexico decided to allow free purchase of gold in exchange for silver coins and bank notes. An Economic Emergency Board was set up on May 13 under the chairmanship of the President, and on July 21 the Government launched a \$40,000,000 defense loan to absorb excess currency and utilize surplus dollar credits to redeem part of the foreign debt.

Growing labor agitation for a curb on prices and for higher wages led the President on September 21 to freeze prices of all basic foodstuffs, announce heavy fines for speculators, and establish a federal monopoly for the production of corn. Yet these measures failed to stabilize food prices, as the 1943 crops were poor at a time when consumption was increasing. On November 20 the President appealed to farmers and peasants to abstain from politics and concentrate upon production. A 15 to 25 per cent reduction in the size of all newspapers was ordered November 27.

Meanwhile the Government on July 14 resumed interest payments (for the first time since 1927) on the foreign debt held by U.S. and British bondholders, in accordance with the agreement of Nov. 5, 1942 (see 1943 YEAR BOOK). On December 6

President Avila Camacho told the Senate that the expected 1944 budget surplus would be used to pay off the foreign debt and prepare for postwar unemployment.

Railway Program Delayed. United States aid in reorganizing and rehabilitating the Mexican National Railways, provided for in November, 1942 (see 1943 YEAR BOOK), was delayed during the first part of 1943 by a controversy over the reforms demanded by the management to eliminate abuses, waste, and lack of discipline among the workers. The Syndicate of Railroad Workers had been given control of the National Railways during the administration of President Cárdenas. The failure of the Syndicate to operate the railways efficiently led President Avila Camacho to entrust the management to a commission of five, three representing the Government and two the Syndicate. However the Syndicate continued to block the management's efforts to appoint its own officials, enact reforms, or enforce discipline. Service on the railways steadily deteriorated and in February, 1943, the system was reported by the general manager to be losing about 1,450,000 pesos monthly.

Strong pressure from the Government and the Mexican press finally induced the Syndicate on March 10 to accept the chief reform measures proposed by the management, including the latter's right to appoint executive officials and to discipline workers guilty of dereliction of duty. This agreement enabled the U.S. railway mission to proceed with its work. Between February and mid-December, the U.S. Government advanced \$4,000,000 and the Mexican Government additional sums for rolling stock and other equipment, much of it obtained second-hand in the United States. Yet relations between the workers and management remained unsatisfactory and in June the Government was obliged to intervene to prevent a threatened nation-wide railway strike. Notwithstanding this experience with nationalization of the principal railway system, the Government obtained authorization from Congress in December to expropriate all the other railways in the country.

Oil Settlement. The U.S. Government also helped the government oil monopoly, which expropriated U.S. and British-owned oil properties in 1938, in obtaining equipment for the maintenance and expansion of operations. According to the President's message of September 1, the daily refinery capacity was then 83,000 barrels, as compared with an average daily capacity of 102,000 barrels in 1938. He said that under the collective labor contract effective between the petroleum monopoly and the oil workers since May, 1942, the workers were receiving about 30,000,000 pesos annually in wages and loan benefits over what they received from foreign companies in 1938.

On September 29 the U.S. and Mexican Governments reached an agreement on the manner and conditions of payment of the \$23,995,991 which Mexico in 1942 undertook to pay for the expropriated American oil properties. This was the final step in carrying out the basic agreement of Nov. 19, 1941 (see 1942 and 1943 YEAR BOOKS). The first payment of \$3,796,391 due under the 1943 agreement was made by the Mexican Government on September 30. The remainder was due in four annual payments.

On October 1 the Standard Oil Company of New Jersey announced its acceptance of the terms reached by the two Governments for settlement of American claims arising from the expropriation. Standard Oil subsidiaries were to receive a total of \$18,391,651 plus interest of \$3,940,843. The

Sinclair Oil Corporation, which made a direct settlement with the Mexican Government in May, 1940, also received the final installment of \$1,500,000 on the \$8,500,000 which the Mexican Government had undertaken to pay.

Internal Politics. Two right-wing movements, one of them reportedly antagonistic to the United States and violently hostile to the Government's close collaboration with Washington, attracted growing attention during 1943. The most important was the *Union Nacional Sinarquista*, a well-organized group of some half a million Catholic laymen pledged to rebuild "a Christian social order" in Mexico "by destroying liberalism, perverse democracy, and anarchy." The Sinarquistas were said to have many members among Mexican colonies in Los Angeles and other parts of the United States. The movement was repeatedly attacked by leftist deputies in the Mexican Congress as being pro-Axis and pro-Fascist, but the Avila Camacho Government rejected demands for its dissolution.

The other right-wing group was the *Accion Nacional* party, led by Manuel Gomez Morin, which demanded restoration of Roman Catholic teaching in the schools (forbidden by the Constitution) and attacked the Government as an inept, one-party dictatorship. *Accion Nacional* vigorously assailed the dominant Party of the Mexican Revolution during the campaign that preceded the election of 147 Federal Deputies and 7 State governors on July 4. A Government decree of April 29 curbed free public assembly in order to prevent "groups in opposition to the National Government from provoking disturbances and discord." It failed to forestall clashes in Mexico City prior to the election when PRM members broke up a number of opposition meetings. It was estimated that less than 1,000,000 of some 6,000,000 potential voters went to the polls. The results proclaimed by the Federal Electoral Board gave the Government party an overwhelming victory. Opposition leaders charged that this was achieved through fraud and chicanery.

Friction between leftists and rightists increased after Congress reconvened in September. Leftist charges that the Church was inspiring the activities of rightist groups led Archbishop Martínez to declare on November 8 that "the Church is not linked with the *Accion Nacional*, the *Union Nacional Sinarquista*, or any other organization of a civil or political character . . ." However a PRM-controlled Congressional committee began an investigation into both the above right-wing movements, asserting that they were composed of "traitors and outlaws." Minor outbreaks of banditry, attributed to difficult economic conditions, were reported during September and October.

Trotsky Killer Sentenced. Jacques Mornard, confessed slayer of Leon Trotsky, the Russian Bolshevik leader and rival of Joseph Stalin, was convicted of premeditated murder and illegal possession of arms by a Mexico City court on April 16 and sentenced to 20 years in prison. Mornard, whose real nationality and political connections remained unrevealed, mortally wounded Trotsky on Aug. 20, 1940, in the latter's private home in the Coyoacan quarter of Mexico City. The slayer had been linked with the Soviet secret police by some observers of the case and was reported supplied with funds by Mexican Communists (see 1940 YEAR BOOK).

Other Events. The Soviet Ambassador to Mexico, Constantine A. Oumansky, was invited to address a joint session of the Mexican Congress held on November 8 to commemorate the 26th anniversary

of the Russian revolution. He received an unusually cordial reception. Early in the year the Mexican Government undertook to provide a refuge for all Spanish Republican refugees in French North African internment camps.

In February a new volcano emerged from the side of a mountain only 200 yards away from the village of Paricutin in the State of Michoacan. In less than a week the volcano developed a crater a quarter of a mile in circumference. It continued to erupt dense columns of smoke, gas, and lava for the remainder of the year, and led to the evacuation of neighboring villages. The phenomenon was referred to as the Paricutin or "Rock Oven" volcano.

See ANTIMONY; BANKS AND BANKING; BRIDGES; CHEMISTRY under *Foreign*; COORDINATOR OF INTER-AMERICAN AFFAIRS; COPPER; DAMS; GEOLOGICAL SURVEY; HURRICANES; IMMIGRATION, EMIGRATION, AND NATURALIZATION; INSECT PESTS; LABOR CONDITIONS; MERCURY; MUSIC; NARCOTIC DRUGS CONTROL; PORTS AND HARBORS; ROADS AND STREETS; SANITATION; SPANISH-AMERICAN LITERATURES; SPANISH LITERATURE; TUNNELS; WATER SUPPLY; WORLD WAR.

MICARTA. See PLASTICS.

MICHIGAN. An east north central State. Area: 58,216 sq. mi. Population: 5,256,106 (1940 census); 5,269,416 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Harry F. Kelly (Rep.), inaugurated in January, 1943, for a two-year term; Lieutenant Governor, Eugene C. Keyes; Secretary of State, Herman H. Dignan; Attorney General, Herbert J. Rushton.

See FLOODS. For governmental changes, see STATE LEGISLATION under *State Government and Employees*.

MICROFILM. See PHOTOGRAPHY.

MICROSCOPES. See PHYSICS.

MIDDLE CONGO. See FRENCH EQUATORIAL AFRICA.

MIDDLE EAST SUPPLY CENTER. A joint British-American war agency, originally established by the British Government in April, 1941, to coordinate the joint resources and civilian requirements of the Middle Eastern countries in essential commodities with a view to the conservation of Allied shipping. Its activities in 1943 covered the following territories: Egypt, Anglo-Egyptian Sudan, Turkey (bulk commodities only), Syria, Lebanon, Ethiopia, Palestine, Trans-Jordan, Malta, Cyprus, Aden, British Somaliland, Italian Somaliland, Iran, Iraq, Eritrea, Saudi Arabia, and Libya. The executive committee of the Center sits in Cairo. A policy committee, known as the Middle East Supplies Committee, functions in London. Chairman of the Executive Committee in Cairo, James M. Landis, U.S. Min-

ister to Egypt; Director-General, R. G. A. Jackson (Great Britain).

The MESC is primarily a planning board, the activities of which are closely tied in with the British-American Combined Boards in Washington and London. Its plans, after being approved in London and Washington, are executed by the State Department, the Board of Economic Warfare, and the Lend-Lease Administration in the United States, and by corresponding government agencies in London. The United Kingdom Commercial Corporation (q.v.) and the United States Commercial Corporation serve as agents for the Center in all commercial transactions. See PALESTINE; UNITED KINGDOM COMMERCIAL CORPORATION.

MIDGET SUBMARINES. See NAVAL PROGRESS under *Small Torpedo Craft*.

MIDWAY ISLANDS. A group of islets in the Pacific, 1,304 statute miles northwest of Honolulu, belonging to the United States. Midway consists of two tiny islets—Sand Islet and Eastern Islet—lying inside of a circular atoll or coral reef that encloses a sheltered body of water about five miles wide. Land area, 28 square miles. From 1935 to Dec. 7, 1941, the previously uninhabited islets were used as a station on Pan American Airways transpacific route to Manila.

In 1939 the U.S. Congress authorized commencement of work on naval-air and submarine bases at Midway. A more extensive program adopted in March, 1941, called for the cutting of a channel 30 feet deep and 300 feet wide into the central lagoon to permit passage of submarines and large seaplane tenders. Landing fields and airplane repair facilities were provided and a garrison of U.S. Marines was established. The islands were placed under the jurisdiction of the U.S. Navy Department and on May 15, 1941, were proclaimed a "naval defensive sea area." The Navy Department reported on Aug. 29, 1942, that construction work at Midway had reached a total value of \$19,795,548.

The Midway installations were heavily bombarded by Japanese naval units on Dec. 7, 1941, and five additional sea or air attacks followed during the first half of 1942. The last of these, on June 4, inaugurated the important naval-air battle off Midway in which a large Japanese fleet seeking to occupy the islands was beaten off with heavy losses. Thereafter Midway served as a base for American air and naval attacks upon Japanese islands and shipping in the Western Pacific. See WORLD WAR.

MILBANK MEMORIAL FUND. See PHILANTHROPY.

MILITARY PROGRESS. War operations during the year were marked, on the part of the United Nations, by an ever growing emphasis on the technique and production of material for amphibious operations. Except for the Sino-Japanese front and long range bombardment from the air, every angle of approach to the enemies required the highly involved and hazardous task of transporting the combat elements and technical services of a land army over water and shifting it from sea to land against armed opposition. To this end the trend toward an ever closer integration of all components of the war team—ground, air, and sea forces—continued to dominate military thought and action.

Important in this respect was the organization in the United States of the Army and Navy Staff College. Announced in May, the new college functions as an agency of the Joint Chiefs of Staff, for

the training of senior officers of the Army, Navy, and Marine Corps, and their air components, in all phases of joint or coordinated operations involving land, sea, and air. Air operations, and the logistics involved in combined operations are stressed. The course is of four months' duration, divided into two phases. The students, specially selected, are normally in the grades of lieutenant colonel and colonel in the Army and Marine Corps, and the corresponding grades of commander and captain in the Navy.

In the first phase of the course, officers selected by the Navy spend one month at the Army's Command and General Staff School at Ft. Leavenworth, Kan., and one month at the Army Air Corps School of Applied Tactics at Orlando, Fla. Concurrently, officers of the Army Air Forces spend one month at the Command and General Staff School, and one month at the Naval War College at Newport, R.I., and officers of the Army Ground Forces take one month at the Air Corps School of Applied Tactics and one month at the Naval War College. The second phase of the course, for all the students, consists of two months of special studies, in accordance with a curriculum devised by the Joint Chiefs of Staff and administered by a faculty of officers designated by them, at Washington, D.C. Commanders and staff officers from all the active combat areas are brought in, fresh from the field, to give their experiences and lessons to the students. Upon graduation, these officers are dispatched immediately to the staffs of active theaters throughout the world. Lieut. Gen. John L. DeWitt, U.S. Army, former commanding general of the Western Defense Command and Fourth Army, is Commandant of the College, and Commodore E. J. Foy, U.S. Navy, is deputy commandant. The first class of the Army and Navy Staff College was graduated Sept. 30, 1943.

Many of the basic principles underlying amphibious warfare were worked out by the U.S. Marine Corps, the main mission of which, for the past 20 years, has been to provide an amphibious expeditionary force to operate with the fleet. A few officers of the Army and Navy have been assigned to Marine Corps Schools and some units of the Army given amphibious training at the Marine Corps' large bases in New River, N.C., and San Diego, Calif.

As the war progresses and the size of amphibious operations increases the problems of training, material, communications, and command increase. Lessons from the earlier operations, at Guadalcanal, Port Moresby, Milne Bay, Noumea, and others, have been studied carefully in laying plans for subsequent large scale overseas operations from the initial assault through the landing of combat troops, the seizure or construction of air fields, and the subsequent supply of large forces on beaches where there are none of the conventional port facilities. Rear Adm. Francis W. Rockwell, U.S. Navy, Commander, Amphibious Forces, Pacific Fleet, points out that:

In no other type of operation does the coordination and cooperation of all branches of all the various services play so vital a part. Landing Forces have been composed of troops from the U.S. Army, Marines, Australians, New Zealanders, and Canadians (sometimes jointly, sometimes singly). Attack transports and landing ships are manned both by the Navy and Coast Guard. Supporting transports and cargo ships have been manned by the Merchant Marine. Air support has been given by land based Army, Navy, and Marine planes of all types and by carrier based striking and covering forces. Naval task forces including all types of combatant vessels from battleships to converted yachts have been assigned to the various operations. Planning, command, and communications have indeed been "joint" in the finest sense of the word.

During the year amphibious operations marked virtually all the assaults in the South and Southwest Pacific, in the Aleutians, which were finally cleared of Japanese, and in the Mediterranean, where last year's gigantic task of transporting and landing armies in North Africa was followed by the landing and seizing of Sicily, the crossing of the Straits of Messina, and the landing at Salerno to continue the fight up the Italian peninsula toward Rome. As the year closed discussion centered around the projected attack upon Europe itself, and to this end the Allied high command was being organized in England under the leadership of Gen. Dwight D. Eisenhower, U.S. Army, who conducted the campaigns into North Africa, Sicily, and Italy. Lieut. Gen. Jacob L. Devers, U.S. Army, was transferred from his post as Commanding General, European Theater of Operations, U.S. Army, to be Deputy Supreme Commander of Allied Forces in the Mediterranean Area, under Gen. Sir Henry M. Wilson, British Army. Prior to leaving England, General Devers described the training of U.S. Ground forces there, emphasizing their amphibious character:

After the Allied troops under command of General Eisenhower embarked for Africa, other Ground Forces began to arrive in the United Kingdom, and the training was started for cross-Channel operations. This training included extensive maneuvers, in which American and British troops participated. These exercises took advantage of lessons learned in Africa and elsewhere. Axiomatically, any operation against the Continent from this Theater will be of an amphibious nature at the outset. Therefore, amphibious and combined operations occupy a large part of the intensive training program now in force, and by incorporating the experiences of our own task forces and those of our Allies in this training schedule, it is believed that the American soldier in the United Kingdom today is prepared to equal or even better the brilliant record of amphibious operations which have been carried through in other parts of the globe.

The activation of an assault training center during the past summer was for the purpose of carrying forward this amphibious work to a point heretofore hardly imagined. Men are trained day and night in every phase of these difficult operations. The training is repetitious and thorough, so that under great stress men will act automatically in safeguarding themselves while destroying the enemy.

Some of the training in England has been in the Combined Training Centers operated by the British Combined Operations Command under Lord Louis Mountbatten and later under Maj. Gen. R. E. Laycock. The work of the Combined Operations Command has been primarily that of a laboratory for Allied forces, in which experimental work, the development of tactical methods and specialized material, and the training of troops for future operations and armed reconnaissance proceeded continuously.

Communications. The faster moving type of warfare and the fact that organizations that formerly worked rather independently now must work as one has vastly increased and complicated the problem of communications. Land, sea, and air forces must be in closest touch with each other and the force commander must be in constant communication with all. The fact that the commander's headquarters usually must be shifted from ship to shore during the course of combat adds further difficulties. Communications units must be trained and equipped to go everywhere the landing units go. There must be constant communications between the landing parties and the incoming ships and landing craft. Air observation must be linked with naval bombardment while later there must be close liaison between the artillery units ashore and the naval gunnery officers afloat. The British Combined Operations Command worked out a sys-

tem whereby artillery officers, termed Forward Observation Officers, are landed with the first or second wave of the assault, accompanied by signal detachments. Other artillery officers, termed Bombardment Liaison Officers, sail in the cruisers or destroyers which will carry out the bombardments. The Forward Observation Officers select targets and signal their map references to the bombardment liaison officers who communicate them to the naval gunnery officers. Corrections in aiming and changes in targets are similarly effected.

In the United States, the Army Signal Corps, under Maj. Gen. Harry C. Ingles, Chief Signal Officer, has worked in its own laboratories, with industry and with the Office of Scientific Research and Development to design and produce the many types of communications equipment needed in the large quantities required.

The new "walkie-talkie" has been of particular value to the infantry and artillery. It packs a powerful radio station in a unit on the back of one man. The five-pound "handie-talkie" puts a five tube transmitter and receiver, batteries and telescopic antenna, all compact in the grip of a scout's hand, especially valuable for front line reconnaissance. From these small sets radio equipment ranges up to huge truck sets. The Signal Corps has been particularly pleased with the rolling radio station identified as SCR-299, complete with its own power unit, capable of sending messages hundreds of miles either when stationary or when in motion. Each tank and tank destroyer, too, has its own radio station, designed to withstand the vibration and hard usage of combat. Such refinements as push-button tuning simplify the task of the operator and save precious time in combat. For fliers forced down at sea, a new portable transmitter has been devised which automatically emits distress calls by the turning of a crank.

A sound-powered telephone operated without batteries proved a most useful piece of Signal equipment. Power in the telephone is generated by the human voice. It is capable of carrying its messages as far as ten miles under favorable conditions and has a range of five miles under almost any circumstances. Commercially developed, the sound-powered telephone was adopted to war communications by the Signal Corps. The equipment was found particularly advantageous on Guadalcanal because of the lack of batteries, which have been found susceptible to deterioration from the humidity and dampness of the South Pacific. In addition, it is considerably smaller, more compact, and more durable than battery-powered telephones. The orally-powered telephone equipment was installed on Guadalcanal for fire control of infantry mortars and within infantry companies. See also COMMUNICATIONS; PHYSICS.

Relationship of Land and Air Forces. A new doctrine defining the command and employment of air power and its relation to the land forces was approved by the Chief of Staff of the Army, Gen. George C. Marshall, on July 21, 1943, and published in a revision of Field Manual 1-5. This doctrine sets forth clearly that the "command of air and ground forces in a theater of operations will be vested in the superior commander charged with the actual conduct of operations in the theater, who will exercise command of air forces through the Air Force commander and command of ground forces through the Ground Force commander." The pertinent text of this new doctrine is as follows:

1. Relationship of Forces.—Land power and air power are coequal and interdependent forces; neither is an auxiliary of the other.

2. Doctrine of employment.—The gaining of air superiority is the first requirement for the success of any major land operation. Air forces may be properly and profitably employed against enemy sea power, land power, and air power. However, land forces operating without air superiority must take such extensive security measures against hostile air attack that their mobility and ability to defeat the enemy land forces are greatly reduced. Therefore, air forces must be employed primarily against the enemy's air forces until air superiority is obtained. In this way only can destructive and demoralizing air attacks against land forces be minimized and the inherent mobility of modern land and air forces be exploited to the fullest.

3. Command of Air Power.—a. The inherent flexibility of air power, is its greatest asset. This flexibility makes it possible to employ the whole weight of the available air power against selected areas in turn; such concentrated use of the air striking force is a battle winning factor of the first importance. Control of available air power must be centralized and command must be exercised through the air force commander if this inherent flexibility and ability to deliver a decisive blow are to be fully exploited. Therefore, the command of air and ground forces in a theater of operations will be vested in the superior commander charged with the actual conduct of operations in the theater, who will exercise command of air forces through the air force commander and command of ground forces through the ground force commander. The superior commander will not attach army air forces to units of the ground forces under his command except when such ground force units are operating independently or are isolated by distance or lack of communication.

b. Aviation directly under command and control of other commanders. (The Commanding General, Army Air Forces, has such technical command of this aviation as is necessary for the control and supervision of training and the supply and maintenance of equipment peculiar to the Army Air Forces.) This category consists of air forces assigned to theater or task force commanders.

The principle of united command exercised through commanders of forces assigned to the general operation is carried out all along the line. In his biennial report, issued Sept. 8, 1943, General Marshall, Chief of Staff of the Army, pointed out:

A development of the Joint Chiefs of Staff and Combined Chiefs of Staff organizations is the unity of command for a contemplated operation under one commander directly responsible to the Joint Chiefs of Staff or the Combined Chiefs of Staff. When a joint or combined force commander has been designated and the units composing his force assigned, his command responsibilities are the same as if the force involved were all of one service or one nation. He exercises his command through the commanders of forces which have been assigned him, and normally in operations this will consist of the assignment of their respective missions. In carrying out its mission the tactics and technique of the force concerned are the responsibilities of the commander of the subordinate force.

See COMBINED and JOINT CHIEFS OF STAFF. For air forces, Air Transport Command, etc., see AERONAUTICS.

Army Organization. A number of modifications in Army organization, including new tables of organization for armored divisions, were announced to the service by the War Department in October. Some of the changes, such as the reduction in size of the infantry division, reduction in size of staffs of units of all sizes, creation of a light division and transfer to the field army of many functions and units formerly held in the corps, had been under way for some months previously.

Pointing out that the "organization of ground combat and supporting service units was being revised extensively," the War Department set forth its reasons for the reorganization as follows:

(a) To secure the maximum use of available manpower.

(b) To permit transport overseas of a maximum of fighting power.

(c) To provide greater flexibility in organization in keeping with the principle of economy of force and massing of military strength at the decisive point.

(d) To reduce headquarters and other overhead in order that command functions may keep pace with modern communication and transport facilities.

(e) To provide commanders with the greatest possible amount of offensive power through reduction in passive defense elements.

The Armored Division. Newest and most sweeping of the changes ordered by the Army was the modification of the armored division. Formerly this division, numbering nearly 14,700 officers and enlisted men, consisted of a headquarters, two armored regiments (each consisting of two medium tank battalions and one light tank battalion), an armored infantry regiment of three battalions, three field artillery battalions armed with 105-mm. howitzers, a large division service train, a reconnaissance squadron, and the usual supporting units—medical, military police, signal, etc.

Under the reorganization, size of the division has been reduced and regimental organization abolished in the infantry and tank units.

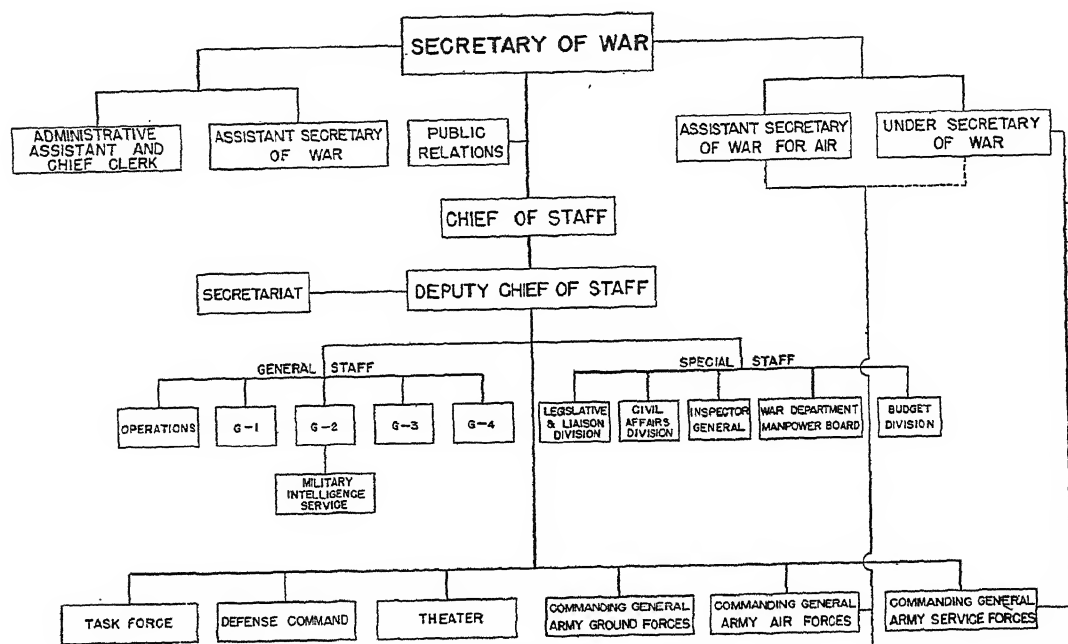
Instead of six tank battalions, grouped into two

the principle that armored and infantry divisions will operate together in a corps."

Aside from a slight reduction in personnel due to increased economy in employment of troops, and the addition of a few medium tanks to the division's field artillery, little change was made in the artillery organization.

The reconnaissance squadron of the armored division and separate reconnaissance squadrons were made identical, except that an additional reconnaissance troop and an additional assault gun platoon were included in squadrons of the armored division, thus permitting interchange of units where necessary.

Abolition of the two armored regiments and the infantry regiments released three colonels for



ORGANIZATION OF THE ARMY

regiments, there are now three enlarged tank battalions, each with one light tank company and three medium tank companies. These battalions are interchangeable with tank battalions of the General Headquarters Reserve permitting the latter to be assigned to armored divisions for the support of infantry divisions and as replacement units for armored divisions. Although the number of tanks has been reduced, heavier armament gives the division greater fire power than under the old organization.

The old infantry regiment has been abolished, and each of its three battalions enlarged and made a separate battalion.

The division's old organic supply battalion has been eliminated from the division since its battalions, both infantry and tank, have been made more self-sustaining. Part of the supply battalion has been absorbed in the battalions, the remainder eliminated from the division.

"The new organization of the armored division," the War Department stated, "is in accordance with

other assignments. Two of these were removed from the division, reducing the total of colonels from seven to five. One of the two brigadier generals also was removed.

The new organization contemplates a major general commanding, a brigadier general commanding one of the combat groups, and a colonel commanding the other. A second colonel commands the reserve combat elements. Other colonels include a chief of staff of the division, the commander of the division train, and the commander of the division artillery.

Two combat command headquarters, each capable of controlling a variable number of tank and infantry battalions, are included in divisional headquarters. One of these combat commands, as stated, is normally headed by the brigadier general, and the other by a colonel.

Infantry Divisions. Without changing the basic organization, the infantry division has been reduced by approximately 8 per cent in strength and 14 per cent in motor vehicles. Despite these reductions, fire power of the division has been increased.

The motorized divisions were eliminated and the transportation formerly a part of these divisions is held in pools to meet special situations. The infantry division can be moved at need by a troop transport battalion. Training of all infantry divisions will include movements by means of the troop transport battalions.

A new type of light division suitable for amphibious, airborne, mountain, and jungle operations has been organized. This light division is smaller than the infantry division, but firepower in small arms and automatic weapons is approximately the same. Artillery is of types that can be handled. Transport consists essentially of hand carts, pack animals, and quarter-ton trucks. Supply and service elements of the light division have fewer personnel than those of the infantry division.

In respect to divisions generally, certain signal and engineer units were moved to higher echelons.

The strength provided the division engineers is being held to a minimum, the War Department pointing out that "all types of divisions are relatively mobile units and the nature and extent of engineer operations under such conditions must necessarily be limited." Where additional engineer strength is required, engineer units, including combat battalions, ponton companies, and bridge trains, will be provided from the army pool, thus reinforcing or relieving division engineers of projects beyond their means.

Corps and Field Army. In accordance with a trend of long standing, corps headquarters were divested of administrative functions, permitting the corps to concentrate on tactical and training functions. The field army continues as a tactical and administrative unit, relieving its assigned corps of administrative functions.

The organic elements of the corps now include a headquarters and headquarters company, military police platoon, signal battalion, headquarters and headquarters battery and corps artillery, and a field artillery observation battalion.

Functions of a corps in an army are now primarily tactical. The functions of a separate corps will necessarily be both tactical and administrative, since the separate corps is in effect a small army.

Other units may be assigned to a corps in accordance with its combat mission. These include divisions, groups, or battalions of field artillery, anti-aircraft artillery, tank, tank destroyer, engineer, and cavalry reconnaissance elements. "In combat, nondivisional units must be employed most effectively either as a group or under divisional control," the War Department told the Service. "Grouping of battalions during training provides essential supervision by higher commanders. However, such training must not preclude the combined training of battalions and groups with divisions. Permanent attachment of battalions to divisions is undesirable from the point of view of maximum flexibility."

In a reduction of the supply forces of divisions and similar units, the field army is charged with responsibility and is being provided with the means of placing supplies within convenient reach of regiments, separate battalions, and smaller units. The army handles all supplies upon arrival in the combat zone and establishes and maintains supply points. Using units do not require personnel for loading supplies at the supply point since army personnel are provided for this duty.

The Army's statement of modifications in organizations further emphasized: That in communications zones, large consolidated supply and repair

depots, even though dispersed over a considerable radius, are more efficient than small depots; that the communications zone should make provision, through establishment of a general depot and necessary camps, for rapid clearing of ports of debarkation; and that ships be unloaded at a rapid rate, augmenting the port organization by using all available troops, including combat troops.

Reduction in Staffs. In March, orders were issued by Lieut. Gen. Lesley J. McNair, Commanding General, Army Ground Forces, to reduce the size of staffs of all echelons. Experience gained is resulting in a general reduction of staffs to provide only sufficient personnel for combat needs since operations cannot be swift and effective if staffs are large. The reductions are effected by curtailing the number of assistants in the various subdivisions of the staff. In the armored division, for example, the personnel on duty has been reduced about one-third.

Discussing the duties of staffs, the Department has stated:

The staffs have been provided to meet the general concept that field orders should habitually be oral or in message form for all elements of the division and frequently for the corps. Liaison officers of a high type should be trained and used for dissemination of orders, where possible, rather than following the general practice of assembling subordinate commanders for issuance of orders, thus taking them away from their units at critical times with a consequent delay in operations.

Groups and Brigades. Pooling of units is being emphasized in Army organization. General Headquarters pools include battalions or the equivalent—self-administered—of field artillery, anti-aircraft artillery, tank destroyers, reconnaissance, cavalry, engineers, and tanks.

Group headquarters are provided for field artillery, tank destroyer, engineer, cavalry, anti-aircraft artillery, and tank units. Brigade headquarters are provided in a limited number of cases.

The group, a tactical unit, consists of a headquarters and a varying number, usually three or four, of separate battalions or squadrons. The brigade is retained in certain cases for command of a number of groups, usually three or four. No battalions will be assigned organically to a group and no groups will be assigned organically to a brigade. Control headquarters similar to group headquarters are provided for service units in a ratio of one to four or six small units.

"The flexibility of the new organization," the Department stated, "makes it readily possible to form task forces without reorganization of units or disruption of the old fixed regimental organization and at the same time permits a massing of means as required by the situation."

For the Army air forces, see AERONAUTICS.

Weapons. Foremost development in arms and armament was in the comparatively new field of rocket propelled projectiles. On March 27 the War Department announced the "Bazooka"—the name applied by the soldiers to the rocket projector developed by the Army Ordnance Department. It is a new type of weapon, hurling a high explosive projectile, and can be carried by two men at a dog trot or can be carted about in a jeep. Also during the year the Germans began the use of rockets against the U.S. Air Force bombing planes over Europe. The German launching tubes are fastened below the wings or below the fuselage of two-engine fighter craft. The projectile itself looks something like a mortar bomb. It is designed to be launched while out of range of the bombers' guns and to explode within the formation of bombers. The Russians, too, are reported to be using a rocket

bomb. According to the British publication, *The Aeroplane*, the Russian bomb is launched from a guide rail running along the underside of the wing of the launching plane. The Germans also are reputed to have large numbers of long range rocket guns emplaced along the French side of the English channel.

The rocket projectile of the U.S. Army's "Bazooka," it was reported, is capable of penetrating the armor of any enemy tank which has been in action against the United Nations' forces. It is being supplied in quantity by the United States to American and other United Nations' troops. It has been in action for several months on various foreign fronts, where it has proved as destructive against thick brick walls, rock masonry, structural steel, and railroad rails as it has against enemy tanks. During the North African campaign, "Bazookas" of one U.S. Army division alone were reported to have destroyed at least six enemy tanks.

The "Bazooka" launcher, or gun, is a metal tube somewhat more than 50 inches long and less than 3 inches in diameter. It is open at both ends. Attached to the tube are a shoulder stock and front and rear grips for the firer, together with sights and an electric battery which sets off the rocket propelling charge when the launcher trigger is squeezed. There also are safety devices.

The launcher is operated by a two-man soldier team—one the firer, the other the loader. When the launcher is held in firing position, the loader is at the right and rear of the firer. The launcher may be fired from any position which may be used normally by a rifleman in combat. After the loader has inserted the rocket in the launcher, he turns a contact lever to the "fire" position, signals "ready" to the firer, and then drops down and away from the rear end of the launcher and grasps a new rocket. When the firer squeezes the trigger, the rocket propelling charge is ignited and flashes from the rear of the launcher tube.

The rocket itself is heavier than the hand grenade and is nearly two feet long. Its appearance is that of a small, elongated aircraft bomb. Its components are an explosive head, propelling charge powder tube and finned tail, the latter providing accuracy in flight.

The "Bazooka" supplements, rather than supersedes, other weapons. It is standard equipment for certain classes of troops. Raiding groups, tank-hunting parties, and reconnaissance elements have reported it highly effective. It has been used with success by landing parties in neutralizing pillboxes. In defensive action, "Bazooka" teams may be recruited from among chauffeurs, truck drivers, ammunition bearers, orderlies, clerks, and mess personnel.

The Germans, in the battle for Tunisia, employed a number of 62-ton tanks. While their appearance created some public discussion, little has been heard of them since. The U.S. War Department reported that the Germans had built 45 of them. The U.S. Army Ordnance Department had earlier experimented with a 60-ton tank, but the Armored Forces found such a huge vehicle to be too heavy, too large a target, and of too little gun power for its weight. It was, therefore, not put into quantity production. On the other hand the Armored Forces asked for a larger gun with great maneuverability. Accordingly the Ordnance Department developed the M-7 self-propelled mount, carrying a 105-mm. howitzer. This weapon was quite successful at El Alamein.

The year 1943 saw the production levels begin to decline for tanks and small arms ammunition as

well as for rifles, machine guns, bayonets, and similar small arms materiel. Artillery levels moved downward, but the production of artillery ammunition moved upward. Great production of combat planes was considered necessary. Heavy trucks are needed in greater number. See BUSINESS REVIEW for charts on *Armament Production*.

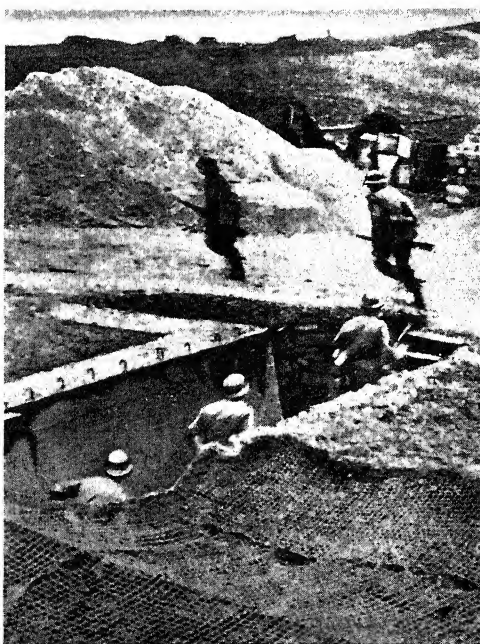
Production shifts, which will continue throughout the duration of the war, not only are the result of tactical changes in the fighting and the conclusion of the training phase for large portions of our troops, but also result from the movement of more and more soldiers overseas and the shifting of the geographical location of the battle.

Expansion of Army posts, camps, and stations in this country reached a peak in July, 1943, when continued large-scale movements of troops to overseas theaters began to exceed the number of new troops inducted. Requirements for housing and training facilities will continue to decline as the continental strength of the Army falls off.

Readjustments in specific categories of the war production program have been influenced by various factors. An over-all yardstick cannot be laid upon the program. For example, tank production during the latter part of the year has leveled downward by approximately 36 per cent from earlier 1943 production levels. This was due in part to the greater need for ships. Available steel had to be diverted from other items. Too, there was a declining need from our Allies for tanks as supplied through lend-lease (q.v.). The rise in effectiveness of antitank weapons also affected the relative importance of the tank as a weapon in various types and places of battle.

Closing of several small arms ammunition plants was announced near the end of the year. Some are turning to other production, some being kept in a standby position in the event future developments require a resumption of production. This program at the end of the year was tapering toward a decline of about 36 per cent, on a dollar volume basis, from the totals of 1943. In this connection, as in a number of other cases, the explanation is one of mass production hitting its stride. Starting from virtually nothing in the way of facilities, this country when attacked needed to build an immediate stockpile of ammunition for defense and for troop training. There was need for all types of facilities that could quickly turn out small arms ammunition. Once facilities were built and working, it was possible to produce such ammunition in great amounts. With a backlog built up, the War Department considered it possible to cut the rate to replacement levels, releasing certain facilities for other uses. A similar situation exists in small arms. Rifles and machine guns lend themselves to huge mass production once facilities are created. During the year, through November, production of small arms materiel rose about 80 per cent from the January level. As the year closed it was starting downward to a level of 30 per cent below the November, 1943, peak production.

The artillery production rate was off more than 18 per cent in November as compared with January and continued to drop. This largely reflects the shift from defense to offense. A sharp reduction has taken place in the output of anti-aircraft guns for home protection. With the increase in the United States' airpower less anti-aircraft artillery was deemed necessary in defense installations. Thus, the production rate on anti-aircraft was cut approximately in half from previous peak levels. See MUNITIONS. For aircraft, see AERONAUTICS.



Press Association, Inc.

EYES TURNED TO THE FORTHCOMING INVASION OF HITLER'S FESTUNG EUROPA

Above: Members of the Supreme Command, Allied Expeditionary Force, named to direct second front operations. Seated, left to right, Air Chief Marshal Sir Arthur Tedder, Deputy Supreme Commander; Gen. Dwight D. Eisenhower, Supreme Commander; Gen. Sir Bernard L. Montgomery, Commander British Land Armies. Standing, left to right, are: Lt. Gen. Omar N. Bradley, Commander American Ground Forces; Admiral Sir Bertram Ramsey, Naval Commander in Chief; Air Chief Marshal Trafford L. Leigh-Mallory, Air Commander in Chief; and Lt. Gen. Walter B. Smith, Chief of Staff. Below: Nazis prepared to defend the Atlantic Wall, alleged to be the greatest fortification of all times. Shown left is a picture which appeared in the *Munich Illustrated Press* with the caption "Camouflaged Exit of an Army Bunker." Right, German infantrymen occupying a new bunker position along the Atlantic Coast during training maneuvers.

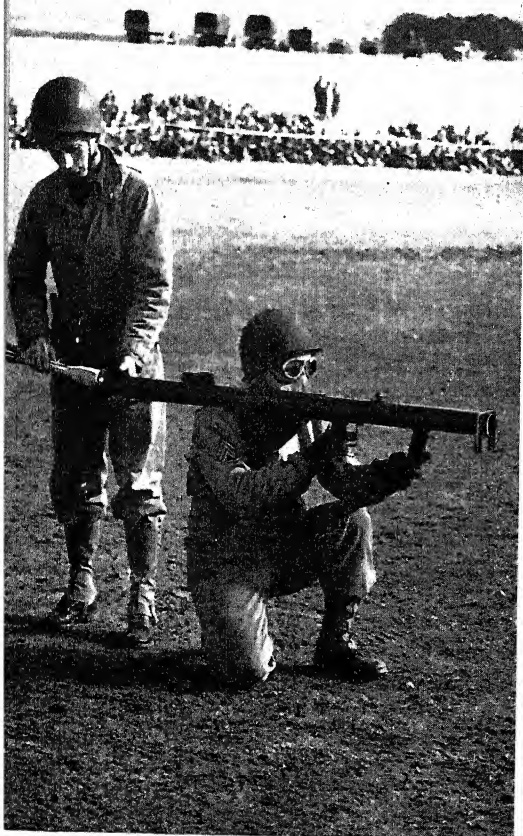


Photo by U.S. Army Signal Corps

Small enough to be carried in an ordinary brief case, the M-3 sub-machine gun, a .45-caliber weapon, fires 450 rounds a minute, is little affected by rain or salt spray, and accuracy improves with use.



U.S. Army Photos



NEW SMALL ARMS FOR U.S. SOLDIERS

At left, the "Bazooka," a rocket gun, as held in proper firing position. The standing soldier is loading a rocket. An anti-tank weapon. At right, the "Bazooka" and its rocket compared with the rifle grenade launcher and its missile. Also shown are a Very pistol and a flare projector. At upper right, a launcher-adaptor attached to an ordinary Army rifle to propel a high-powered rifle grenade. Especially effective against pill-boxes and for ranges greater than hand grenades and lower than mortars.

Campaign Lessons. Taking the actual reports of the Tunisian Campaign while the participants were available, Allied Headquarters in North Africa compiled in August a training memorandum summarizing the lessons learned. The digest later was transmitted to the War Department and issued to the service in this country to aid in their training program.

It was reported that the outstanding general lesson of the campaign was the failure to use the armored division in sufficient strength or in concentrated mass. The one armored division that participated was not employed as a unit until the last phases of the battles for Mateur and Bizerte. Previous to these actions the armor "arrived piecemeal and was used piecemeal throughout." As stated by the commander of one of the combat commands, "Offensive action by American (armored) troops was marked by a dispersal of effort." Mass action was in fact precluded by the necessity of spreading the armored division over a wide front because it was the only force available with sufficient mobility and power to meet sudden thrusts over a long and thinly held line. The above-mentioned employment, though justified by necessity, should be recognized as contrary to established doctrine, the Training Memorandum pointed out. The principle of mass action with armor, employed in depth on a narrow front and directed against a weak segment of the hostile line, should be the guiding formula in major offensive armored action. Dispersal of strength or piecemeal employment, it was emphasized, should be avoided.

In the use of tank destroyers it was pointed out that the main lesson resulted from misconception of the idea of "offensive action." Destroyers must not be used to "hunt tanks." Neither can they be used as tanks in a fire fight with tanks without disastrous losses.

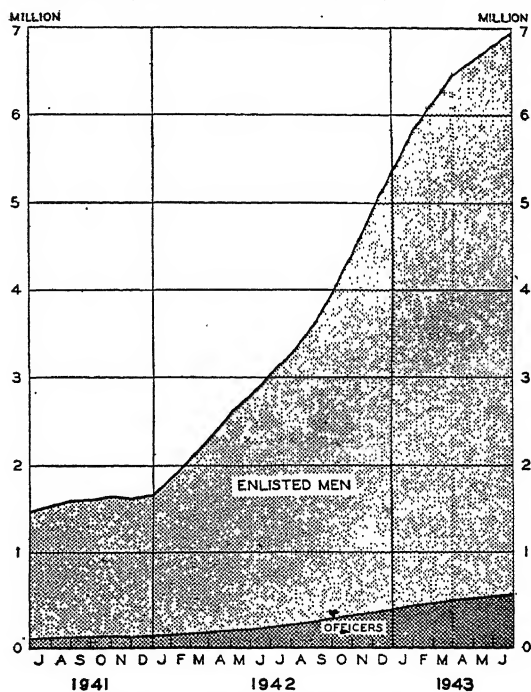
The campaign demonstrated that the maneuver of tank destroyers largely depends on the existence of concealed routes of approach, and on the degree of enemy observation from both observation posts and direct firing antitank guns. The concept of "seek, strike, and destroy" must be modified to meet existing conditions and the capabilities and limitations of the destroyers as applied to the situation and mission. As stated by the commander of the destroyer group which participated in the campaign, "An individual destroyer has not the means to accomplish vigorous reconnaissance to locate tanks." Likewise experience has shown that tank destroyers, unless in coordination with other arms, can seldom strike at vital objectives. The best method of employment in the campaign was found to be that of establishing a base of fire and giving close direct support to other antitank elements from hull-down positions. Destroyers must not chase tanks. They should reconnoiter for the approach of enemy tank formations and be prepared to meet them with defensive fire from selected hull-down positions. Every effort must be made to establish tank traps into which the hostile tanks may be drawn and destroyed.

Mines and booby traps played a larger part in the North African campaign than had generally been anticipated. Experience showed that mine warfare has assumed far greater tactical importance than had been previously realized. As developed in the present war, the land mine and the various types of booby traps have proved to be most formidable and powerful weapons and serious obstacles in the advance and operations of all arms. Much has been learned from the Tunisian campaign, and this experience will be utilized in

future operations. The outstanding lesson has been the realization that detecting, disarming, and clearing mines and booby traps is no longer a special or exclusive function of the Engineers. Although these operations are primarily functions of engineer troops and have expanded with current developments in the war, it has been learned by experience that troops of all arms must be proficient in mine warfare. In many instances Infantry, Artillery, and other organizations must take care of the mine problem in their own areas, since it often becomes impossible for Engineer troops to cover every area where mines have been laid. Exposure to mines and booby traps in the numbers encountered in the Tunisian Campaign necessitates the distribution of mine detectors to all arms. The general experience of the Infantry divisions has led to their recommendation for the allotment of one or two detectors per company, battery, or troop.

Composition of the Army. The only authentic figures on the distribution of the Army made public during the year were those given to the Senate Military Affairs Committee on September 15 by Lieut. Gen. Joseph T. McNarney, Deputy Chief of Staff. He reported that the original allotments for the 1943 Army provided in round numbers for:

- a. Air Forces and supporting arms and services including anti-aircraft artillery for the defense of operating airdromes.....2,800,000
- b. Defense of the continental United States, Panama, the Caribbean bases, Alaska, and the Aleutians530,000
- c. Defense of our lines of communication to include Australia and the numerous islands of the Pacific, maintenance of our Pacific bases and the defenses of Hawaii.....350,000
- d. Zone of the Interior activities—ports, prisoners of war inclosures, depots, etc., in the continental United States.....400,000
- e. Men in schools, replacement training centers, replacement depots, colleges (Army Specialized Training Program) and in hospitals recovering from sickness or wounds.....650,000
- f. Overhead in the United States. These men furnish the housekeeping troops for all training stations. They provide medical care, operate



Biennial Report of the Chief of Staff, 1943

utilities—power, light, heat, water—perform local guard and do all of the other necessary chores so that Field Force units can devote their entire attention and time to intensive training. .400,000
g. Ground striking force organized into combat divisions and supporting units, a material part of which is in action overseas.3,118,000

This allotment of forces contemplated a total of 8,248,000 by the close of 1943. However, decision was made to keep the over-all total at 7,700,000. What changes were made in the above distribution has not been announced, except for the fact that the Air Forces would be retained at 2,800,000 during 1944.

On Jan. 27, 1944, the Army Air Forces Training Command issued statistics on the number of graduates of the nationwide network of flying and technical schools. (These were the first statistics of the kind authorized by the War Department since Pearl Harbor.) The categories included 100,799 pilots, 20,086 bombardiers, 18,805 navigators, 107,218 aerial flexible gunners, and 555,891 ground and air combat crew technicians graduated between Jan. 1, 1939, and Nov. 30, 1943. The 555,891 technicians represented the graduates of basic courses and not the total number produced. The pilots are qualified as either fighter or bomber pilots with the exception of 3,491 glider pilots, 2,348 liaison pilots, and 444 women pilots. The

Command uses about 29,000 training planes, and fatalities, for 11 months of 1943, averaged one per 25,600 hours flown.

For military campaigns, see **WORLD WAR**. For the operation of the draft, see **SELECTIVE SERVICE SYSTEM**. For Army appropriations and expenditures, see **PUBLIC FINANCE**; **UNITED STATES under Congress**. For legal decisions on military jurisdiction, see **LAW under War Decisions**. For the Army Specialized Training program and other training activities, see **DENTISTRY**; **EDUCATION**; **LIBRARY PROGRESS**; **UNIVERSITIES**, the latter including a list of the schools. For a variety of subjects affecting individual service men, see **ARMED FORCES**. For military medicine, see **MEDICINE AND SURGERY**; **PSYCHIATRY**; **PUBLIC HEALTH SERVICE**. See also **PHOTOGRAPHY**. Compare **NAVAL PROGRESS**.

LEROY WHITMAN.

MINERALS AND METALS. For a general picture of mineral production in the United States see **BUSINESS REVIEW under Basic Industries** and the accompanying table showing value and principal mineral products by States. See the separate articles on all mineral products of industrial importance or present strategic value. See also **ART under Sculpture**; **CHEMISTRY under Alloys and Metals**; **ELECTRICAL INDUSTRIES**; **GEOLOGICAL SURVEY**; **MA-**

MINERAL PRODUCTION BY STATES, 1941
[U.S. Bureau of Mines]

State	1941	1940	Rank	Percent of total value for United States	Principal mineral products in order of value
Ala.	\$ 82,730,210	\$ 84,998,018	18	1.47	Coal, iron ore, cement, stone.
Ariz.	100,472,791	85,291,347	14	1.79	Copper, gold, silver, zinc.
Ark.	47,081,326	37,479,135	25	.84	Petroleum, coal, bauxite, natural gas.
Calif.	506,795,395	455,672,038	3	9.03	Petroleum, natural gas, gold, cement.
Colo.	73,960,602	63,188,421	20	1.32	Coal, molybdenum, gold, silver.
Conn.	5,284,955	3,914,177	43	.09	Stone, clay products, sand and gravel, lime.
Del.	492,631	457,326	49	.01	Clay products, stone, sand and gravel, raw clay.
D.C.	700,000	640,480	48	.01	Clay products.
Fla.	19,268,779	14,854,206	33	.34	Phosphaterock, stone, cement, sand and gravel.
Ga.	21,049,261	16,932,335	32	.37	Raw clay, stone, cement, clay products.
Ida.	45,673,740	40,799,920	27	.81	Lead, zinc, silver, gold.
Ill.	320,509,559	277,943,011	5	5.71	Petroleum, coal, stone, cement.
Ind.	30,572,397	58,975,110	19	1.43	Coal, cement, petroleum, stone.
Iowa	28,872,177	26,006,904	29	.51	Cement, coal, stone clay products.
Kan.	171,991,685	130,859,896	9	3.06	Petroleum, natural gas, zinc, coal.
Ky.	169,009,195	131,974,410	10	3.01	Coal, natural gas, petroleum, stone.
La.	228,440,044	189,153,312	7	4.07	Petroleum, natural gas, sulfur, natural gasoline.
Me.	4,692,448	4,374,976	44	.08	Stone, cement, sand and gravel, slate.
Md.	17,291,528	12,605,171	39	.31	Sand and gravel, coal, cement, stone.
Mass.	9,293,169	7,573,122	39	.17	Stone, sand and gravel, clay products, lime.
Mich.	142,433,673	124,774,681	12	2.54	Iron ore, petroleum, cement, salt.
Minn.	178,790,274	128,571,690	8	3.18	Iron ore, manganese ore, sand and gravel, stone.
Miss.	61,545,052	50,324,566	35	.32	Petroleum, sand and gravel, natural gas, clay products.
Mo.	86,583,460	79,487,873	22	.110	Lead, cement, stone, coal.
Mont.	6,499,070	4,692,146	17	1.54	Copper, zinc, silver, gold.
Neb.	46,341,010	42,570,529	42	.12	Cement, petroleum, sand and gravel, stone.
Nev.	46,341,010	42,570,529	26	.83	Copper, gold, silver, tungsten ore.
N.H.	1,382,506	1,065,337	46	.02	Clay products, stone, sand and gravel, feldspar.
N.J.	39,074,518	33,653,732	28	.70	Zinc, clay products, sand and gravel, stone.
N.M.	97,849,086	80,969,723	15	1.74	Petroleum, copper, potassium salts, natural gas.
N.Y.	91,582,704	76,119,505	16	1.63	Cement, petroleum, stone, sand and gravel.
N.C.	18,915,461	21,112,732	34	.34	Clay products, stone, bromine, sand and gravel.
N.D.	3,327,627	2,987,351	45	.06	Coal, sand and gravel, clay products, stone.
Ohio	164,826,884	130,655,129	11	2.94	Coal, clay products, natural gas, lime.
Okl.	263,763,923	235,535,062	6	4.70	Petroleum, natural gas, zinc, natural gasoline
Ore.	12,830,176	11,229,670	38	.23	Gold, stone, cement, sand and gravel.
Penn.	737,143,530	618,347,505	2	13.13	Coal, cement, natural gas, petroleum.
R.I.	1,133,400	994,997	47	.02	Stone, sand and gravel, clay products, lime.
S.C.	7,236,503	5,305,597	41	.13	Stone, clay products, raw clay, sand and gravel.
S.D.	24,501,696	23,528,825	31	.44	Gold, stone, cement, zinc.
Tenn.	56,301,592	42,683,407	23	1.00	Coal, stone, cement, zinc.
Tex.	868,082,690	725,005,009	1	15.46	Petroleum, natural gas, sulfur, natural gasoline.
Utah	122,386,473	104,392,989	13	2.18	Copper, gold, coal, silver.
Vt.	8,131,670	6,979,772	40	.14	Stone, slate, talc, asbestos.
Va.	71,340,934	50,003,672	21	1.27	Coal, stone, sand and gravel, cement.
Wash.	28,507,282	28,090,188	30	.51	Coal, cement, gold, sand and gravel.
W.Va.	425,626,303	329,891,960	4	7.58	Coal, natural gas, petroleum, stone.
Wis.	17,020,722	13,553,683	37	.30	Stone, iron ore, sand and gravel, cement.
Wyo.	43,073,533	52,751,354	24	.94	Petroleum, coal, natural gas, natural gasoline.

CHINE BUILDING; MINES, BUREAU OF; NATIONAL BUREAU OF STANDARDS; WAR PRODUCTION BOARD.

MINERALS BUREAU, MINERALS RESOURCES AND CO-ORDINATING DIVISION. See WAR PRODUCTION BOARD.

MINES. See MILITARY PROGRESS under *Campaign Lessons*.

MINES, Bureau of. Millions of tons of domestic minerals were charted and metallurgical processes were tested and improved in pilot plants and laboratories during 1943 as the Bureau of Mines continued to direct all of its facilities toward the successful prosecution of the nation's war program. As the relative criticalness of the various metals and minerals changed, the Bureau geared its activities to meet each new challenge.

Equally important wartime assignments were completed in fuel conservation and utilization, research on the production of high-octane gasoline from petroleum, increased output of helium, explosives research and control, protection of manpower and equipment, compilation of authentic data on mineral economics and statistics, and the dissemination of essential research material.

Mineral Exploration and Research. The Bureau's exploration for critical metals and minerals extended over most of the States and Alaska. Several million tons of concentratable chrome ore were marked out in Montana and smaller deposits were found in other States and Alaska. The program was instrumental in increased fluorspar production from the Illinois-Kentucky field; and in finding of substantial tonnages of cobalt-copper ore in Idaho. Seven tungsten projects were completed in Idaho, Colorado, Nevada, Wyoming, New Mexico, and Alaska, with more than 500,000 tons of low-grade ore indicated.

Working in many areas simultaneously, the Bureau conducted vanadium projects in the Colorado-Utah field and the potentially important Idaho-Wyoming area; charted more than 800,000 tons of copper ore in 17 exploratory projects; revealed 8,000,000 tons of zinc and zinc-lead ores in 20 exploratory projects in 14 States; increased known reserves of mercury ore by 600,000 tons; established the largest known reserves of tantalum ore in the United States in New Mexico; tested beryl-bearing pegmatites in New England and a rare helvite deposit at Iron Mountain, New Mexico; furthered its search for tin in Alaska and sought additional deposits in seven States; increased known reserves of bauxite by several million tons, and charted 100,000,000 tons of alumina-bearing clays; and developed a process to produce magnesia from a 400,000,000-ton dolomite deposit near Las Vegas, Nev., in the Boulder Dam area.

In addition to marking out many beds of unexploited ore suitable for production, the Bureau's engineers and metallurgists successfully demonstrated many practical methods for mining, recovering, and processing ores. Beneficiation methods were studied with ore samples submitted by the Bureau's own crews and by individuals and other Government agencies. Nonmetallic investigations included research on the availability of mica for radio condensers and certain types of airplane spark plugs, domestic talcs for high-frequency insulators in military radio equipment, asbestos for fireproof coverings, magnesia for refractories, cement, gypsum, mineral wools, flake graphite, mineral pigments for camouflage paints, and celestite (strontium) for tracer bullets and flares. Explora-

tion of flake graphite in Alabama alone proved the existence of 1,174,000 tons of measured ore.

Helium. Continuing to maintain United States world monopoly on the production of helium, the Bureau last year increased the output of this lightweight, noninflammable gas to about 25 times that of prewar days. The Bureau completed a new helium plant in Texas, modified and supplemented the equipment of its Amarillo plant in Texas, and rushed construction of three other helium plants in the Southwest. Despite greatly increased demands for helium for the Navy's anti-submarine blimps, for meteorological balloons of the Army, Navy, and Weather Bureau, and for Army barrage balloons, the Bureau of Mines was able to provide considerable quantities of helium for medical purposes, in diving and caisson work, and in the welding of magnesium airplane parts by a new process. In recognition of this remarkable production of helium, the Army and Navy "E" award was presented to the Bureau's Amarillo and Exell, Texas helium plants. (See MACHINE BUILDING.)

Petroleum and Natural Gas. The Bureau's long-range studies in petroleum and natural gas proved helpful to industries seeking new production records in special lubricants, high-octane aviation gasoline, materials for synthetic rubber, and similar byproducts. Petroleum engineers undertook special tasks at the request of the Petroleum Administration for War (q.v.) and provided data on crude oil for war needs, improved methods for producing petroleum, and new and additional sources of petroleum byproducts. Work was started on thermodynamics of hydrocarbons and derivatives, primarily as an aid to the synthetic rubber program. Aviation gasoline research was expanded to include both natural and synthetic components and exacting analyses were made on crude oils, condensates, and natural gasolines to find new sources of aviation gasoline, toluene, and benzene.

Coal Research. As the nation depended more heavily on solid fuels, the Bureau's valuable knowledge and experience in fuel testing and research facilitated production of high-quality metallurgical coke of uniform grade, increased the efficiency and power of Federally-operated plants, solved many problems involving the storage of coal, and successfully demonstrated the use of colloidal fuel (a mixture of pulverized coal and petroleum) in a commercial plant.

In a 12-month period nearly 23,000 samples of coal were analyzed relative to the purchase of millions of tons of fuel by the Army, Navy, and other Government agencies. Bureau coal-sampling trucks visited 500 mines in 18 States to obtain more than 1,500 specimens for analysis.

Increased emphasis centered on the Bureau's research in producing synthetic liquid fuels from coal, resulting from the continuing decline in the discovery of new oil pools in the United States, heavier wartime consumption of natural petroleum, and increased transportation difficulties. Experiments progressed in the operation of the laboratory-scale pilot plant for the direct hydrogenation of coal and investigations were begun on the indirect process for making synthetic liquid fuels from water-gas derived from coal.

Bureau-made synthetic gasoline was successfully used in a history-making airplane flight from Morgantown, W.Va., to Washington, D.C., on Nov. 6, 1943, proving conclusively that synthetic gasoline made from American coal can be used in aircraft, thus adding an important chapter in synthetic liquid fuels research.

Earlier Bureau tests on 14 American and Alaskan coals revealed that fuel oil, Diesel oil, motor gasoline, and aviation gasoline could be obtained from them by hydrogenation. Two members of the Bureau's staff visited coal-liquefaction plants and research laboratories in England, and a measure was introduced in Congress proposing the construction and operation of demonstration-size plants by the Bureau to pave the way for ultimate commercial production of synthetic liquid fuels by private industry.

Explosives Control. Maintaining its strict surveillance over the manufacture, purchase, sale, storage, use, and possession of nonmilitary explosives and ingredients, the Bureau in 1943 issued about 350,000 licenses to vendors, purchasers, and foremen under the wartime Federal Explosives Act. The Bureau examined and acted upon 4,000 additional applications from manufacturers, schools, and laboratories, and investigators reported on more than 9,000 stores of explosives.

Economics and Statistics. Information provided by the Bureau regarding domestic and foreign production, distribution, consumption, and uses of minerals and metals helped war agencies in their allocation, financing, production, and procurement programs. Special studies by commodity experts provided up-to-date economic and statistical facts sought by the Army, the Navy, the Metals Reserve Company, the War Production Board, Defense Plant Corporation, Office of Price Administration, the Petroleum Administration for War, the Solid Fuels Administration for War, and the Board of Economic Warfare. The Bureau last year was given the responsibility of technical direction of mineral attaches in foreign countries and the publication for Government use only of economic facts regarding mining conditions.

Plant Protection. Strengthening home front production and supply plants against losses due to sabotage, subversive activities, injuries to workers, fires, floods, and other eventualities, the Bureau's trained engineers in 1943 inspected nearly 2,000 mines, mills, smelters, and related industries under the Facility Security program. Working in close cooperation with the Army, the Office of Civilian Defense, and other agencies, the Bureau also acted for the War Department in inspecting mines and related facilities.

Health and Safety. The Bureau of Mines health and safety program assisted in protecting life and property in the face of accelerated production, longer hours, and shortages of labor and equipment. Federal coal mine inspectors, who visited nearly 1,200 mines in virtually all of the coal-mining States and Alaska (representing a combined annual production of 293,218,266 tons of coal or 46 per cent of the 1942 output) reported the adoption of many Federal recommendations resulting in safer working conditions and increased efficiency. These mines employed a total of 233,160 men.

The Bureau trained 45,952 employees of the mining and associated industries in first aid, increasing the total to 1,584,774. As a link in the civilian defense training, about 675 persons were qualified as first-aid instructors bringing the total number trained to 16,500. Basic mine-rescue training was given to 2,498 mine workers, and 154 persons completed the advanced course. Bureau personnel participated in mine-rescue and recovery work following mine explosions and fires.

The prevention of occupational disease and improved efficiency and morale of workers through better hygienic conditions were stressed. Approxi-

mately 12,000 air samples from anthracite mines and from zinc, manganese, and ordnance plants were analyzed; approximately 10,000 air samples were analyzed for Federal coal mine inspectors and other field workers; 500 air samples were analyzed for the Army and Navy, and 1,500 samples were tested as a part of the research work regarding the safety of electrical mining equipment, respiratory protective devices, and similar equipment.

The inflammability characteristics of metallic and nonmetallic dusts were studied, and special emphasis was placed on the prevention of explosions involving butadiene, a principal constituent in the manufacture of synthetic rubber. The dusts of aluminum, antimony, cadmium, chromium, copper, magnesium, tin, zinc, and other war metals were tested and industries advised regarding precautionary measures which should govern their handling.

Publications and Films. Although all publications not compatible with the prosecution of the war were eliminated, the Bureau issued 551 bulletins, technical papers, handbooks, *Minerals Yearbook* chapters, and contributions to technical journals. The heavy demand for technologic and statistical data and other informative material regarding all phases of the mineral industries prompted the Bureau to issue a series of confidential reports for restricted circulation among war agencies and certain producers of war minerals.

In constant demand by the Army, the Navy, the Office of Civilian Defense, foreign agencies, and industrial training classes, were the Bureau's free educational motion pictures, produced in cooperation with industry. In addition to various branches of the United Nations' armed services, they were shown in South American republics, in Canada, China, South Africa, and in Great Britain. Millions of school children and students at industrial training centers also viewed the films, which were shown to audiences estimated at 7,928,201 persons on 95,876 occasions in 1943. Since 1922, the Bureau's films have been exhibited to audiences totaling 103,584,650 persons on 957,936 occasions.

See GEOLOGICAL SURVEY.

R. R. SAYERS.

MINIMUM WAGE. See WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS. Compare LABOR CONDITIONS under *Wages*.

MINING INDUSTRIES. See BUSINESS REVIEW; MINES, BUREAU OF; TUNNELS; topics listed under MINERALS, especially COAL, IRON ORE.

MINNESOTA. A west north central State. Area: 84,068 sq. mi. Population: 2,792,300 (1940 census); 2,544,699 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. Governor Harold E. Stassen (Rep.), now in the Navy, was inaugurated in January, 1943,

for a two-year term; acting Governor, Edward J. Thyne; Lieutenant Governor, Edward J. Thyne; Secretary of State, Mike Holm; Attorney General, J. A. A. Burnquist.

MINORITIES. See BRAZIL, HUNGARY, IRELAND, NORTHERN; PERU; RUMANIA, TURKEY, and YUGOSLAVIA; REFUGEES.

MINT, Bureau of the. A Bureau of the U.S. Department of the Treasury which directs the coinage of money and supervises the activities of the three Mints (Philadelphia, Denver, and San Francisco), the two Assay Offices (New York and Seattle), the gold Bullion Depository at Fort Knox, Ky., and the silver Bullion Depository at West Point, N.Y. Director: Mrs. Nellie Tayloe Ross.

MIQUELON ISLANDS. See ST. PIERRE and MIQUELON.

MISSISSIPPI. An east south central State. Area: 47,716 sq. mi. Population: 2,183,795 (1940 census); 2,030,098 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Thomas L. Bailey (Dem.), inaugurated Jan. 18, 1944, for a four-year term; Lieutenant Governor, Fielding L. Wright; Secretary of State, Walker Wood; Attorney General, Greek L. Rice. See ELECTIONS.

MISSISSIPPI RIVER. See WATERWAYS, INLAND.

MISSOURI. A west north central State. Area: 69,674 sq. mi. Population: 3,784,664 (1940 census); 3,582,355 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Forrest C. Donnell (Rep.), inaugurated in January, 1941, for a four-year term; Lieutenant Governor, Frank G. Harris; Secretary of State, Dwight H. Brown; Attorney General, Roy McKittrick. See FLOODS; LEAD.

MOBILE SERVICE DIVISION. See UNITED SERVICE ORGANIZATIONS.

MOLDAVIAN SOVIET SOCIALIST REPUBLIC. See UNION OF SOVIET SOCIALIST REPUBLICS, under *Area and Population*.

MOLDS. For Mycoban, see CHEMISTRY, under *Foods*.
MOLUCCA ISLANDS. See NETHERLANDS EAST INDIES under *Area and Population*.

MOLYBDENUM. A sharp downward trend in molybdenum requirements during 1943 radically transformed a critical production-consumption relationship early in the year to one of abundance by late fall.

In mid-year, Climax Molybdenum Co., which produces about 75 per cent of United States output at its Colorado mines, was the top name on the national mine labor priority list. Molybdenum, which had replaced tungsten no longer available from China at the outbreak of war, was being replaced in alloy steel melting ratios by tungsten from domestic mines.

Then in July and August, consumption showed a decrease of about 17 per cent from the January-June average, putting an entirely different complexion on the situation. By the end of October, the War Production Board estimated over-all use at 52,400,000 lb. for the full year compared to an anticipated production of 62,800,000 lb.

The most important factor in reducing demand was lower export requirements. The United Kingdom which normally had been getting about two million lb. of molybdenum a quarter, reduced its original request for the fourth quarter by 1,500,000 lb. In the third quarter of 1942, allocations for lend-lease and Canada were 4,386,000 lb., compared with 3,445,000 lb. in the third quarter of 1943. Russia was getting 340,000 lb. monthly in the latter part of 1943, according to the WPB, the balance going to Great Britain and Canada, with small amounts to Australia.

As consumption dropped, mine output was rising. In the first six months of the year, molybdenum output in usable form totaled 31,200,000 lb. or 5,200,000 lb. monthly, made up approximately 93 per cent of domestic production and 7 per cent imports. In July and August output amounted to 10,700,000 lb., or 5,300,000 lb. a month, representing a gain of approximately 2.7 per cent.

For 1944, the WPB estimates that 44,561,000 lb. will be required comprising 11,093,000 lb. for the first quarter; 11,122,000 lb. for the second quarter; 11,123,000 lb. for the third quarter; and 11,223,000 lb. for the fourth quarter. Molybdenum was removed from allocation Jan. 1, 1944.

By the end of August, 1943, stocks had reached nearly what the WPB ferro-alloy branch felt should be a minimum stockpile objective, 24 million lb.—about the equivalent of a six-month stockpile of virgin molybdenum at the current consumption rate. Because such a large proportion of molybdenum is mined domestically, and waterborne concentrates are a minor factor, the necessity of a larger inventory was felt to be questionable.

The lower requirements for molybdenum during 1943 reflected directly a sharp decline in high-speed steel production, which is the principal product for which molybdenum is required. In March, 1943, the United States produced somewhat more than 1,250,000 ingot tons of alloy steel; by November, this rate had decreased to 1,050,000 tons. Moreover, large quantities of alloy scrap were available, and by the end of the year about 40 per cent of the molybdenum being used in the production of alloy steel came from scrap.

CHARLES T. POST.

MOLZAHN CASE. See LAW under *War Decisions*.

MONACO. A Mediterranean principality surrounded on its land sides by the French department of Alpes-Maritimes. Area, 370 acres; population (1939), 23,973. Chief towns: Monaco (capital), La Condamine, Monte Carlo. During peacetime the main sources of revenue were the tourist traffic and the gambling concession at Monte Carlo. Budget (1939): 38,892,921 francs (franc averaged \$0.0251 for 1939). A ministry assisted by a council of state administers the country under the authority of the Prince. Legislative power rests with the Prince and the national council of 12 members elected by universal suffrage for a four-year term. The election scheduled to be held during 1942 was suspended as "inopportune, considering present circumstances." Ruler, Prince Louis II (succeeded June 26, 1922).

MONEY, MONETARY UNITS. See **BANKS AND BANKING; FINANCIAL REVIEW;** the countries under *Finance*.

MONGOLIA. An extensive, vaguely defined region of east-central Asia, bordered by the Soviet Union and Tannu Tuva on the north, Manchuria on the east, China proper on the south, and Sinkiang (Chinese Turkestan) on the west. It is divided by an irregular east-west line through the Gobi desert into Outer Mongolia, on the north, and Inner Mongolia, on the south.

Inner Mongolia. Following the establishment of the puppet state of Manchukuo in Manchuria in 1931, the Japanese added to it the Inner Mongolian Province of Jehol in 1935 and the six northern counties ("hsien") of the Inner Mongolian Province of Chahar in 1936. The Inner Mongolian area remaining under direct Chinese jurisdiction then consisted of the 10 southern counties of Chahar and the provinces of Suiyuan and Ningxia. Beginning in 1937 the Japanese occupied this part of Chinese Inner Mongolia to a point west of Paotow, the western terminus of the Peiping-Suiyuan Railway.

With the cooperation of some Mongol and Chinese leaders, the Japanese established at Kalgan on Nov. 22, 1937, the so-called Federated Council of Meng Chiang under the leadership of Prince Teh Wang, leader of the "young Mongol" movement and a lineal descendant of Genghis Khan. The Council assumed general supervisory functions over Chinese and Mongol communities within the 10 southern counties of Chahar, practically all of Suiyuan, and 13 counties in northern Shansi Province of China proper. This region was divided into "federal autonomous governments." On Sept. 1, 1939, the Meng Chiang Federated Council was reorganized as the "Federal Autonomous Government of Mongolia." It claimed jurisdiction over an area of about 200,000 square miles in Inner Mongolia and China proper, with a population of 5,000,000 to 7,000,000 Chinese and Mongols, and about 36,000 Japanese civilians. Budget expenditures for 1941 were estimated at 177,000,000 Meng Chiang yuan (1 yuan = 1 yen).

Stock raising and agriculture are the chief occupations in Inner Mongolia. Sheepskins are the most important trading commodity; the output is estimated at about 1,000,000 matured pelts and 300,000 lamb pelts annually. Livestock owned by some 2,000,000 Mongols in Inner Mongolia was estimated as follows in 1939: Cattle, 560,000; horses, 500,000; sheep, 3,955,000; camels, 52,000. Rye, potatoes, buckwheat, and wheat are the main crops. Exports passing over the Peiping-Suiyuan railway in 1940 were reported at 113,308,000 yuan; imports, 157,700,000 yuan. The Japanese have

built military highways into Inner Mongolia and on June 1, 1940, opened direct telephone service between Kalgan and Japan.

Outer Mongolia. The area is estimated at 622,200 square miles and the population at from 540,000 to 2,000,000. The inhabitants are mainly Mongols but there are Russian and Chinese minorities. The capital, Ulan Bator Khoto (Urga) has about 70,000 residents; Albanblak, 20,000.

Outer Mongolia is a soviet republic, the independence of which is guaranteed by the Soviet Union under a mutual assistance pact signed Mar. 12, 1936. However the Soviet Union in 1924 recognized the suzerainty of the Chinese Republic over the region. The political and economic systems were reorganized on the soviet model. Ownership of lands, forests, mineral resources, and factories was collectivized. Foreign and domestic trade is a monopoly of People's Central Cooperative; foreign trade is carried on exclusively with or through the Soviet Union. Soviet instructors are said to have trained and equipped with modern arms a Mongol army of 250,000 men. The government is in the hands of the Mongolian People's Revolutionary Party. The only political party permitted, it had about 12,000 members in 1939 and was controlled by the Comintern. Supreme authority rests in an elective assembly (Great Huruldan), which meets at least once annually and while in recess delegates executive powers to a Little Huruldan of 30 members, which in turn appoints a Premier and executive committee.

Stock raising, game hunting, agriculture, manufacturing, and mining, in the order named, are the chief occupations. Meat, milk products, hides and skins, wool, furs, wheat, rye, millet, and coal are the main products. Extensive mineral resources remain undeveloped. State factories, all erected since 1924, produce machinery, washed wool, wool textiles, felt, leather, sheepskin coats, shoes, and electric power.

The first railways in Outer Mongolia—connecting Ulan Bator Khoto with the Nalaiha coal mine 22 miles distant and linking Kiakhta with the Trans-Siberian Railroad at Ulan Ude—were reported to have been completed in 1939. The capital is connected with Ulan Ude by truck road and airline. Steamers ply the Selenga and Orkhon Rivers. However caravans still handle the bulk of internal transport. There is a state banking and monetary system, the unit of currency being the tukrik containing 17 grams of pure silver.

History. A delegation from the Mongolian People's Republic, headed by Premier Marshal Chobalsan, spent more than two months in Moscow during the winter of 1942-43 and was entertained by Premier Stalin at the Kremlin on February 3. It presented substantial gifts to the Red Army. Chungking reported in April that the Japanese were building defense works in Inner Mongolia and had transferred all departments of the Chahar provincial government south of the Great Wall. On September 12 the Chinese Central News Agency reported a clash between Outer Mongolian and Japanese troops on the border between Outer and Inner Mongolia. See **CHINA** under *History*.

MONITORING STATION. See **FEDERAL COMMUNICATIONS COMMISSION.**

MONOPOLY. See **ANTITRUST DIVISION; FCC; LAW; MUSIC; NEWSPAPERS.**

MONTANA. A mountain State. Area: 147,138 sq. mi. Population: 559,456 (1940 census); 472,595 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Sam C. Ford (Rep.), inaugurated in January, 1941, for a four-year term; Lieutenant Governor, Ernest T. Eaton; Secretary of State, Sam W. Mitchell; Attorney General, R. V. Bottomly. See CHROMIUM; COPPER; FLOODS; SILVER.

MONTE CARLO. See MONACO.

MONTENEGRO. See YUGOSLAVIA.

MONTERRAT. See LEEWARD ISLANDS.

MORAVIA. See BOHEMIA AND MORAVIA; CZECHOSLOVAKIA.

MORMON CRICKET. See INSECT PESTS.

MORMONS (Latter-Day Saints). See RELIGIOUS ORGANIZATIONS.

MOROCCO. A former Moslem empire of northwestern Africa, still under the nominal rule of a sultan, but divided since 1912 into French and Spanish protectorates. The city and district of Tangier on the Strait of Gibraltar were internationalized and demilitarized by a series of agreements beginning in 1906, but were incorporated in Spanish Morocco, over the protests of Great Britain and the United States, on Nov. 23, 1940 (see TANGIER). The Sultan resides in the French Zone, usually at Rabat, seat of the French administration. Capital of the Spanish Zone, Tetuán.

Area and Population. The area of French Morocco is estimated at 153,870 square miles and the civilian population at 7,983,473 (March, 1941). The population at the 1936 census was 6,298,528 (5,874,888 native Moslems, 173,533 French, 161,312 native Jews, and 59,058 other Europeans). Excluding Tangier and the enclaves of Ifni and Cabo Jubi (Cape Juby) in southwestern Morocco, the Spanish Zone has an area estimated at 8,108 square miles and an estimated population (1936) of 795,202 (about 738,000 Moslems, 44,379 Europeans, 12,918 Jews). Estimated populations of the chief cities in 1941: Casablanca, 453,000 (131,000 Europeans); Rabat, 171,600 (83,600 Europeans); Meknes, 109,500 (15,000 Europeans). Populations at 1936 census: Fez, 144,424 (9,623 Europeans); Marrakech, 190,314 (6,849 Europeans). In the Spanish Zone, the principal towns were: Tetuán, 49,535 (1936); Alcazar, 30,762; Larache, 29,477. The Spanish garrison towns of Ceuta (1941 pop., 59,115) and Melilla (77,192) on the African Mediterranean coast are not included in the protectorate. French and Spanish are the official and business languages in the French and Spanish Zones, respectively, but the natives speak mainly Moorish-Arabic and the various Berber dialects.

Production. Agriculture and stock raising are the chief occupations of the French Zone. Yields of the chief crops were (in metric tons): Wheat, 653,000 in 1940; barley, 2,128,000 in 1939; oats, 76,000 in 1939; corn, 217,400 in 1938; olive oil, 15,000 in 1940-41. Linseed and wine grapes are

other leading crops. The 1941 wine output was 500,000 hectoliters (of 26.42 gal.). The 1938 wool clip was 20,300 metric tons. Livestock in 1942 included 12,000,000 sheep, 6,950,000 goats, 2,155,000 cattle, 719,000 donkeys, 202,000 horses, 154,000 mules, 164,000 camels, and 175,000 swine. The sea fisheries in 1938 yielded 30,300 metric tons of fish, valued at 33,300,000 francs. Estimated output of the principal minerals in 1940 in the French and Spanish Zones was (metric tons): Coal, 100,000; iron ore, 1,600,000; manganese ore, 90,000; tungsten, 16; zinc, 1,000; antimony, 200; molybdenum ore, 280; petroleum, 25,000 bbl. French Morocco in 1939 produced 1,492,000 metric tons of natural phosphates. Industries include flour mills, breweries, cement factories, soap works, sardine and tuna canning plants, Moorish handicraft. See MANGANESE.

The Spanish Zone raises much the same crops as the French Zone, but in limited quantities. Iron ore (805,000 metric tons in 1938), lead, and some antimony are exported. Stock raising and fishing are other occupations. The four active fisheries caught 3,012 metric tons of fish in 1940.

Foreign Trade. Publication of trade statistics for French Morocco was suspended upon the outbreak of the World War. Merchandise imports in 1938 were 2,184,900,000 francs; exports, 1,512,400,000 francs. France supplied 733,343,000 francs of the imports and took 676,248,000 francs of the exports. Imports into the Spanish Zone in 1938 were valued at 123,146,184 pesetas; exports, 71,143,224 pesetas.

Finance. The 1939 budget estimates for the French Zone were: Receipts, 1,185,054,070 francs; expenditures, 1,184,958,430. The Moroccan franc was unpegged from the French franc after June, 1940, and fluctuated widely in accordance with supply and demand until the American landings of Nov. 8, 1942. Thereafter the franc was pegged at 300 to the pound sterling (later revised to 200 to the pound). The expenditure budget for Spanish Morocco was 562,361,322 pesetas in 1943 (480,234,171 pesetas for defense).

Transportation. French Morocco in 1942 had about 1,150 miles of railway line, 4,842 miles of highways and roads. In 1938, 3,352 vessels of 5,640,397 tons entered French Moroccan ports. In the Spanish Zone there were about 72 miles of railway and 1,400 miles of roads.

Government. The Sultan Sidi Mohammed ben Youssef (proclaimed Nov. 18, 1927) maintains a separate government in French Morocco, headed by a Grand Vizier. However all effective authority is exercised by the French Resident General, who is Foreign Minister to the Sultan and head of the French administration at Rabat. Gen. Auguste Noguès, the Resident General during 1936-43, adhered to the Vichy Government after the Franco-German armistice of June 22, 1940, and then to the Darlan regime established at Algiers Nov. 12, 1942. In the Spanish Zone the Sultan delegates his authority to a Khalifa, named by him from a list of two candidates submitted by the Spanish Government. Actual authority is exercised by a Spanish High Commissioner (Lieut. Gen. Luis Orgaz Yoldi) residing at Tetuán. Khalifa for the Spanish Zone, Sidi Muley Hassan Ben el Mehedi. See below for 1943 developments.

HISTORY

Political developments in French Morocco during 1943 were largely determined by the evolution of the Giraud regime at Algiers toward democratic republicanism and its amalgamation with the Fighting French movement in the French Com-

mittee of National Liberation early in June (see FRANCE under *History*). The prodemocratic trend at Algiers and Allied victories in Tunisia rendered untenable the position of General Nogues and other high French military and civil officials in French Morocco, who had maintained the Fascist principles and policies introduced by the Vichy Government even after the landings of American troops and the adhesion of the Darlan-Giraud regime to the United Nations' cause.

American correspondents visiting Morocco during the first quarter of 1943 reported that General Nogues was continuing repressive measures against de Gaullists, Freemasons, Jews, and other pro-United Nations' elements, with the approval and support of some leading industrialists, and of some army, church, and governmental officials. The pro-Fascist and at times pro-Axis activities of the Vichy-created Legion of Veterans were encouraged by the Nogues regime, while leaders of the de Gaullist veterans organization (*Fédération des Anciens Combattants*) were imprisoned or otherwise restricted in their activities. Among the French populace generally, there was widespread political apathy, profiteering, and lack of faith in a United Nations' victory. The corporative economic controls introduced by Vichy, known as the groupement system, were used to fight republicanism and discriminate against prodemocratic elements.

In February the Bank of Morocco attempted to send some \$750,000 worth of gold to German-occupied France, the move being blocked by Giraudist authorities. General Nogues was slow in carrying out the decrees for the restoration of republican laws issued by General Giraud in Algiers. American military and economic officials in Morocco likewise encountered obstructionism and non-cooperation from some French civil officials. When Gen. Charles de Gaulle became co-chairman of the Committee of National Liberation, he insisted upon the dismissal of Nogues. The latter submitted his resignation on June 5 in response to a written request from General Giraud, and was permitted to leave for Portugal. He was replaced by Gabriel Puaux, former Fighting French High Commissioner in Syria and Lebanon. This appointment was followed by a general reorganization of the French administration in Morocco along lines dictated by the republican policy of the Committee for National Liberation.

With the slow elimination of Axis influence in Morocco, the Moslem and Arab nationalists were reported to be turning from Germany to the United States in search of aid and moral support for their claims to a larger measure of independence. The Sultan of Morocco, stating that he regarded the French protectorate as having lapsed, indicated that he would welcome the joint protection of the United States, Great Britain, France, and possibly Spain.

Meanwhile there was steady improvement in the difficult economic situation that existed at the time of the American landings (see 1943 YEAR BOOK, p. 425). The provision by the Allies of consumer goods and of farm machinery and parts aided the resumption of production and exchange, and a bumper cereal crop was harvested.

An important ten-day conference attended by President Roosevelt, Prime Minister Churchill, and the Anglo-American Combined Chiefs of Staff took place in Casablanca January 14-21. During his stay in Morocco, President Roosevelt made an inspection trip to Rabat and Port Lyautey and journeyed by automobile with Prime Minister Churchill to Marrakech. He also inspected Gen. Mark W.

Clark's U.S. Fifth Army, stationed in Morocco since the landings of Nov. 8, 1942. While undergoing advanced training for its subsequent invasion of Italy, this army secured the Allied lines of communication through Morocco to Algeria and Tunisia against disruption by hostile natives or by the Spanish forces based in Spanish Morocco. General Clark made an official call upon the High Commissioner of Spanish Morocco in April and on June 3 entertained the High Commissioner with a battle demonstration by his troops at the Fifth Army headquarters. Casablanca became a naval operating base of the U.S. West African Sea Frontier Force. American naval salvage units recovered most of the 10 French warships, 2 floating docks, and 7 freighters sunk at Casablanca during the American invasion. Most of the 12 freighters sunk at Port Lyautey also were raised.

The ex-Sultan of Morocco, Mulai Abdul Aziz, who was deposed in favor of his brother in 1908, died in Tangier June 9, 1943. A series of "dahirs" (decrees) issued by the French authorities in July and August raised income taxes, taxes on agricultural production, and fees for the registration of various documents. The object was to meet increased local governmental expenses, aid the French war effort, and absorb excess spending power. A Sherifian Office of Commerce with the Allies was established in the French Zone by a "dahir" and residential order of Aug. 13, 1943. The office was empowered to supervise and regulate the furnishing of supplies to Morocco by the Allies and exportation from Morocco to the Allied countries.

MOSCOW CONFERENCE. See GERMANY, GREAT BRITAIN, and UNION OF SOVIET SOCIALIST REPUBLICS under *History*; UNITED NATIONS; WORLD WAR. **MOSLEMS.** See ALGERIA; ARABIA; EGYPT; FRANCE; INDIA; IRAN; IRAQ; PALESTINE; SYRIA AND LEBANON; TRANS-JORDAN; TUNISIA.

MOSQUITOES. See AERONAUTICS under *British Types*. **MOSQUITOES.** See CHEMISTRY under *Insecticides*; INSECT PESTS. Compare MALARIA.

MOTION PICTURES. There were few outstanding films in 1943, but the general standard of excellence was remarkably high. Despite the fact that several of Hollywood's finest directors, players, and writers were in the armed forces and producers displayed extreme caution in the treatment of new material, the screen weathered the second war year with good sense and prosperity. Productions dealing with the global conflict bulked large in terms of quality and popularity. They were happily free from the hysterical underlining that marked war photoplays twenty-five years before. Meanwhile there were a number of first-rate escapist shows to demonstrate that a transition into the postwar period will not prove too awkward.

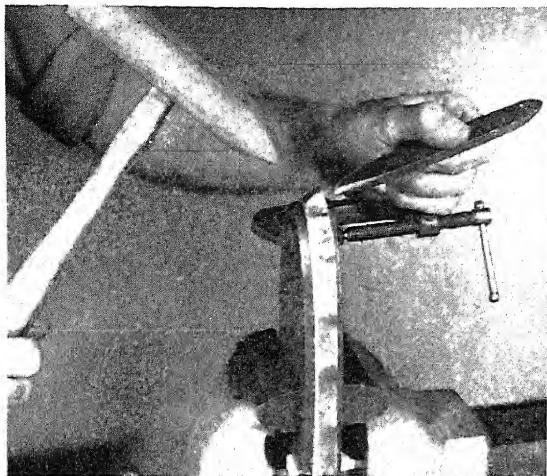
Realism was the keynote of battle picture technique. Taking a cue from the brilliant documentary, or fact films, produced by American, British, and Russian units, producers made a valiant effort to keep material literal and convincing. Such a picture as *Air Force*, for example, made a heavy bomber the true hero of a perilous flight across the Pacific. Written tersely and simply by Dudley Nichols, directed with spectacular effects by Howard Hawks and enacted by a uniformly fine cast including John Garfield, John Ridgely, George Tobias, and others, it proved an engrossing entertainment as well as a grim reminder of the early defeats of the war.

In much the same manner *Destination Tokyo*

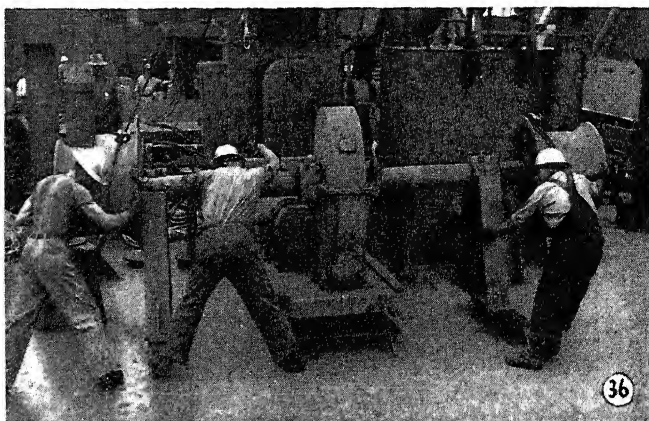


TIMELY THEMES WITH BOX OFFICE APPEAL

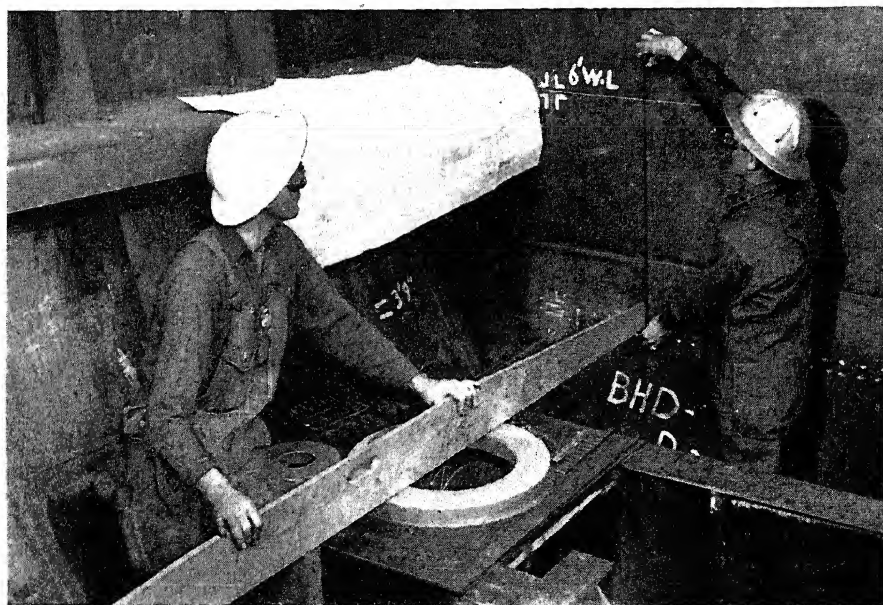
Left: Scenes from "For Whom the Bell Tolls," a Paramount picture based on the Hemingway novel about the Spanish civil war. *Top right:* "Air Force," in which a heavy bomber played the leading role with excellent supporting cast (Vitagraph, Inc.). *Lower Right:* "Watch on the Rhine," a faithful adaptation of Lillian Hellman's stage play about the German underground (Vitagraph, Inc.).



Scenes from U.S. Office of Education visual units illustrating (above) finish forming by hand, (top right) filing template metal, (right) aligning and installing auxiliary machinery, (below) checking elevation of flange on seachest.



When machinery is installed how is it temporarily aligned?



placed a camera inside a submarine and followed it into the harbor of the Japanese capitol, where it rendered invaluable service for the famous Doolittle air raid, the first offensive blow we threw at the Nipponese. Cary Grant and a hand-picked cast saw to it that the piece had dramatic power, in addition to credible factual reporting. News stories and news pictures were carefully scanned to make the subject matter echo in the minds of spectators. The treatment, as in the case of *Air Force*, was expansive, but explicit. There is little question that Noel Coward's brilliant screen account of a British destroyer, *In Which We Serve*, shown in 1942, constituted a pattern for 1943 Hollywood war films.

In addition to the two striking offerings already cited there should be mention of *Corvette, K-225*, which celebrated the exploits of the tiny ships which protected the Atlantic life line at the critical period of U-boat depredations. Richard Rossen directed it with suspense, tension, and a feeling for its maritime background. Land fighting was signalized by such sturdy and provocative motion pictures as *So Proudly We Hail*, a tragic and glorious accolade to the nurses on Bataan, made with great feeling and imagination by Mark Sandrich; *Sahara*, written by John Howard Lawson and Zoltan Korda and admirably performed by Humphrey Bogart and his supporting cast; and *Five Graves to Cairo*, a prophetic account of Rommel's ill-fated African campaign.

War films were not all cast in the same mold. One of the most trenchant of them all was *Watch on the Rhine*, which avoided the obvious manifestations of armed conflict to mirror the effect of imminent fighting on this country. Made from Lillian Hellman's stirring play of the same name, it had great performances by Paul Lukas and Bette Davis and a remarkable burden of meaning in addition to its taut melodramatic outline. *The Human Comedy*, written in somewhat mannered fashion by the eminent playwright, William Saroyan, also had an oblique approach to the war, but it rarely faltered in its attempt to give film-goers a notion of what we are fighting for and why.

The other films dealing with martial subject matter represented a wide variety of approaches to the business of informing and propagandizing the public. *Spitfire*, in which the late Leslie Howard made his final screen appearance, celebrated the inventive genius of the British airplane designer who contributed so much to the sternest crisis of the war. *Action in the North Atlantic* was a rousing screen accolade to the Battle of the Atlantic; *The North Star* was an attempt on the part of Hollywood to dramatize the magnificent struggle that Russia has put up against the Wehrmacht, and *Guadalcanal Diary* documented the terrible struggle of Marines to turn the tide of battle in the Pacific.

Of those pictures which did not treat directly with some aspect of the contemporary war, one of the finest was *For Whom the Bell Tolls*, which, in dealing with the Spanish civil war, became curiously prophetic about the shape of subsequent events. Adapted by the afore-mentioned Dudley Nichols from Ernest Hemingway's celebrated novel, it boasted extraordinary suspense and violent action as well as a splendid gallery of performances. While Gary Cooper, as an American champion of liberty, and Ingrid Bergman dominated the sequences, the portrayal of Pilar by Katina Paxinou made her a contender for top acting honors of the year.

The stage, as usual, contributed more than one

plot to Hollywood, from *Watch on the Rhine* to the excellent transmutation of *Claudia*, directed with fine feeling by Edmund Goulding and played to perfection by Dorothy McGuire, Robert Young, and Ina Claire. There can be no question that it provided a certain relief from the long succession of war films which stretched through the year. *Holy Matrimony*, Nunnally Johnson's brilliant refurbishing of Arnold Bennett's comic novel, *Buried Alive*, was a delightful escapist entertainment, giving Monty Woolley and Gracie Fields something of a field day in the line of acting. *The More the Merrier*, the last picture staged by George Stevens before he donned uniform was a particularly enjoyable high comedy dealing with housing and romantic problems in wartime Washington.

In the same category with the escapist shows already noted was the absorbing story of a collie dog, *Lassie Come Home*, which, by its very simplicity and straightforward screen outline, showed that the field of motion picture make-believe is virtually limitless. *Princess O'Rourke*; *Madame Curie*, starring Greer Garson and Walter Pidgeon of *Mrs. Miniver* fame; *Heaven Can Wait*, and *The Constant Nymph* were other nonwar program pictures which stood out above the general level of Hollywood offerings. The inherent problems of democracy were touched on only lightly. *The Ox-Bow Incident*, a stern account of lynching splendidly staged by William Wellman, was a notable exception. It was considered the best film of the year by the National Board of Review.

Documentaries were so fine that several of them ranked with the best of the fabricated photoplays. *Desert Victory*, the English picture which celebrated the Eighth Army's victorious Libyan campaign, was a brilliant compilation of newsreel clips, maps, and shots of desert warfare. *Report From the Aleutians*, made by the Army Signal Corps under the supervision of John Huston, was another first-class example of significant camera rapportage and editing. *The Battle of Russia*, put together by the corps from a series of newsreels taken on the German-Russian front, was a magnificent record of Soviet resistance to invasion.

Even Walt Disney turned his animated cartoon technique to a collation of factual material in *Victory Through Air Power*, a striking celebration of the power of planes in modern conflict. The great screen cartoonist also contributed an informative and entertaining salute to our good neighbor policy with South America in *Saludos Amigos*, a combination of animated caricatures and straight photography. He continued his short subjects but produced no new feature length film.

With many of the leading male stars in the armed services, films depended less on individual performances than on balanced performing. Paul Lukas, Monty Woolley and Gracie Fields, Ida Lupino, who rescued an ordinary picture called *The Hard Way* by the sheer power of her acting, Katina Paxinou, and Charles Coburn in *The More the Merrier* stood out particularly among their colleagues for their expert make-believe. Among the most promising of the new-comers to Hollywood's ranks were Sonny Tufts of *So Proudly We Hail* and Dorothy McGuire of *Claudia*.

Directing played a less important role in screen excellence than in former years. John Ford, Frank Capra, John Huston, and Garson Kanin, to name only a few, were engaged in making training films and documentaries, and George Stevens, except for the appearance of his brilliant comedy, *The More the Merrier*, was lost to Hollywood film-making for the duration. On the other hand, writing took on

a new importance in giving flavor and quality to screen shows. Nunnally Johnson, with *Holy Matrimony*, demonstrated that a fine script, honestly produced, could define a photoplay, in no uncertain terms. Dudley Nichols wrote eloquently and well for *Air Force* and *For Whom the Bell Tolls* and Lillian Hellman did a masterly job of converting her play, *Watch on the Rhine*, to a motion picture.

From a business standpoint, the screen industry flourished. Several million-dollar pictures were made and production was not critically disturbed by the second year of wartime restrictions. Technical ingenuity sufficed to make up for loss of physical material while the absence of stars and other craftsmen did not affect the public appeal of offerings. For the first time in years RKO showed a profit, while the other studios found that epics and minor program fillers alike returned big dividends. At the close of the year some fifty feature pictures were in production simultaneously. A new firm called International Pictures was formed with William Goetz and Nunnally Johnson as key executives. Independent units were formed in United Artists, including David Selznick's Vanguard Productions, Producing Artists, Inc., and Producers Corporation of America.

Great Britain. Chief of the English films to reach the United States were the documentaries devoted to an exposition of that country's war effort. *Desert Victory* was outstanding, with *The Silent Village* another notable offering. Regular program pictures were not allowed to be made.

U.S.S.R. As in the case of Great Britain, the Soviet studios concentrated on fact films. *Heroic Stalingrad*, a grim report of the last ditch defense of the Russian city, was the finest of them all.

Awards. The New York Film Critics selected *Watch on the Rhine* as the best English language film of the year. Paul Lukas was adjudged the best actor of the year for his performance in that picture. Ida Lupino's portrayal in *The Hard Way* was considered the best feminine acting. George Stevens won honors for his direction of *The More the Merrier* and a special award was given to the United States Signal Corps for its documentaries.

For documentary films and training films, as used by the armed forces and industry, see the topics listed under those headings. See also PHOTOGRAPHY.

HOWARD BARNES.

MOTORBOATING. Wartime priorities held our daring motorboat racers in "drydock" during 1943. Strict gasoline rationing prevented any competition and most "Sunday skippers"—those men who keep boats only for the pleasure of cruising leisurely on inland waters—didn't even bother to remove the tarpaulin from their sleek craft.

THOMAS V. HANEY.

MOTOR CORPS. See RED CROSS.

MOTOR VEHICLES. Having turned from peacetime output to wartime production, the automotive industry added another record in 1943 to its many achievements. Virtually every branch of the armed forces of the Allied Nations received armament, munitions, and other units from plants operated by the manufacturers who had been engaged in constructing motor transportation.

War equipment made by the automotive industry during the year, almost double that of the conversion period of 1942, accounted for \$8,850,000,000 of supplies which the armed forces sent

flying into the skies, rolling over the ground, and darting across the seas. It was an output 100 per cent above the value of civilian goods manufactured by the industry in 1941, one of the top peacetime years. At the current rate, automotive assembly lines are delivering tanks, guns, planes, and scores of other war products, valued at more than \$10 billion annually, a total which represents one-sixth of all war goods produced by all metal working industries in the nation.

As the industry entered 1944, it was almost entirely tooled-up for its war production jobs; with a few exceptions, all of its plant capacity was provided for; and, its mass production techniques were being given full expression. Three months before, in October, 1943, it had passed a milestone, set by WPB Chief, Donald Nelson, in the dark days following Pearl Harbor, when he predicted to the nation that the automotive industry would ultimately reach a war production rate of a billion dollars a month. In terms of physical volume, this billion-a-month rate was achieved fifteen months later, though price reductions and voluntary refunds to the government made in the interim reduced somewhat the actual dollar volume figures reported. In all, the manufacturing efficiencies effected by the industry shaved at least two billion dollars a year off the cost of making war goods, so that, in effect, twelve armored divisions are being equipped for the Army at the cost of ten.

With the numerous plants operated by General Motors, Chrysler, Ford, Packard, and Hudson, and the sub-assembly units which come under their jurisdictions working at peak performance some of the goods produced were in excess of requirements. This situation was met by change-over methods which maintained the smooth flow of output to meet war needs.

Limited production rates prevailing just before the nation went to war, when "defense" orders were mentioned in terms of millions rather than billions, have been completely overshadowed by the torrent of military goods now going to our armies and our allies. Aircraft production by the automotive industry is eleven times the pre-Pearl Harbor rate; gun production has increased tenfold; tanks by eight times. Some 1,038 principal plants are engaged in this war work, and subcontractors are located in 1,375 cities in 44 States.

The nature of the war the Allies are fighting is emphasized by aircraft orders now on the books—they comprise nearly 50 per cent of the industry's forward production job. Deliveries of airframes, aircraft engines, and aero equipment are going ahead at the rate of \$11 million a day—for an annual rate of \$4 billion. Some measure of comparison is afforded when this figure is contrasted with the 1941 peacetime peak of \$3,703,000,000 passenger cars and trucks, or the 1929 high spot of \$3,413,000,000.

Staggering production totals have been achieved in all departments of the industry's war production, despite frequent interruptions to plant working schedules occasioned by design changes, material shortages, and cut-backs in contracts. Shifts in the strategy of war showed up on automotive production lines throughout the year. Early in 1943, an increased emphasis upon offensive weapons and a corresponding de-emphasis on defensive armament resulted in cut-backs in the schedules of anti-aircraft guns, tanks, certain types of shells, and other products. Taking up this slack were increased orders for fighting planes and their engines, tank destroyers, and naval equipment. A re-

flection of the 1944 strategy is seen in the fact that medium bombers are giving way to long-range super bombers, which can reach the heart of Japanese defenses. Production of heavy trucks is given the green light, presumably to provide our invasion forces with sturdy vehicles for maintaining supply lines on 1944's European battlefronts.

Early in the year, material shortages provided frequent deterrents to continuous output, but, as the year advanced, many of these difficulties were ironed out through the refinements of the Controlled Materials Plan, and the Plan's general adoption by most of American industries. Automotive material experts and purchasing men held frequent consultations with government officials during the year, at which they repeatedly urged the adoption of realistic production schedules. When the principle of balancing schedules with materials available became recognized by the WPB and the services, and as paper work was simplified, many of the shortages were eliminated. In fact, by the fourth quarter of 1943, an actual surplus of steel and other materials began to develop, and the once ominous materials crisis appeared to be over for the duration.

The year of 1943 brought, too, a surplus in some types of finished war products, which gave the armed services a problem of disposing of jeeps, trucks, and other supplies for which there was no immediate military need, either because the goods already were obsolete, or because there existed a surplus of the particular types put up for sale.

Abundance of some types of equipment on hand was reflected, too, in the cancellation of war contracts throughout American industry. By the third quarter of 1943, more war contracts had been terminated than had been curtailed at the end of World War I. The largest contract affected in the automotive industry involved production of a medium tank. This cancellation called for the stoppage of tank work in the plants of 500 suppliers which were furnishing parts and equipment to the prime contractor, and demanded the taking of detailed inventories which consumed months of time. As a result of this, and numerous other cases, the Automotive Council for War Production set up a Contract Termination Committee, composed of first-rank executives from representative automotive companies, to point out to responsible governmental officials the importance of the problem, and to urge the establishment of an orderly procedure for handling the physical and financial aspects of terminations.

The paradox of too much war equipment of the same types and not enough of others was the reality that the automotive industry faced in the early stages of 1943. With a backlog of war orders totaling \$15 billion, leaders of the industry had a strong awareness of the huge tasks ahead, and intensified their efforts to keep war production charts moving upward.

At present the automotive industry is producing complete, ready-to-fly assemblies of four different types of aircraft, and is preparing to start work on two more. In addition it is fabricating parts and subassemblies for 11 other types of combat craft and is producing 12 different types of aircraft engines. Four major plants and their network of suppliers have taken on the production of airframes for the new heavy bomber, the B-29, in place of a medium bomber, a change which involved rearrangement of production lines, shifts in equipment, and other dislocations comparable to the conversion-period turmoil. Included in the four complete aircraft is the four-motored Lib-

erator bomber, which is carrying the brunt of the heavy bombing in the Mediterranean theater and over the Pacific. The Grumman Wildcat and the Grumman Avenger torpedo bomber, both carrier based planes, also are being turned out on automotive assembly lines.

Thousands of Boeing Flying Fortresses, North American Mitchell medium bombers, and Martin Marauders now in front line action are assembled from fuselage and wing sections built in automotive plants. The same is true of great fleets of Douglas Boston fighter-bombers and the Vought Kingfisher naval scout planes. The Army's Republic P-47 Thunderbolt and the Navy's Vought Corsair get their wings from automotive body plants and their engines from other plants in the industry. The Consolidated Vultee Liberator Express, the Curtiss Commando, and the Douglas Skymaster—the mainstays of the Air Transport and Troop Carrier commands—receive their major assemblies from the automotive industry.

The twelve engine types now being delivered in tremendous quantities by former automobile manufacturers range from 90-horsepower jobs for aerial jeeps to the powerful Pratt and Whitney Double Wasp, the Wright Cyclone, and the Allison liquid-cooled. Included in the power-plant section is the British Rolls-Royce Merlin which is going into American Mustang fighters and British Lancaster and Mosquito bombers, as well as the RAF Spitfire fighter.

In addition, the industry is turning out such aero equipment as power-driven gun turrets, turbo-superchargers, propellers, bombsights, automatic pilots, gyroscopic flight instruments, parachutes, aerial cannon, and aerial torpedoes.

Of the three medium-tank producers remaining in the field, two are in the automotive industry. Light tanks and tank destroyers are built as well. The services depend heavily upon the automotive industry for guns of various sizes, ranging from Naval artillery to carbines for paratroopers, for shells, and for many types of Diesel equipment for land and sea use. The industry is still, of course, the only American source of all jeeps, ambulances, light, medium, and heavy military trucks.

In contrast with the pre-Pearl Harbor turmoil of getting into production on weapons which they had never before seen, the automotive engineers and production men have worked out techniques of exchanging information on war production which enables them to overcome bottlenecks and to apply their knowledge concertedly to common tasks. This is particularly true in the aircraft field, where under the guidance of the Central Aircraft Council, the one-time competitors in the automotive industry voluntarily swap production information and know-how on aircraft engine and airframe production. Untold additional quantities of war materials have been added to the nation's arsenal as a result of this free and easy interchange of technical data.

With the bottlenecks in machines, materials, and methods broken, one by one, with the progress of the war, only manpower remained late in 1943 as a potential limiting factor on war production. In this field, too, voluntary mechanisms were established to solve problems of absenteeism, transportation, child care, under-utilization of labor, recruiting of women workers, and other factors affecting the production picture.

Among the most effective remedies offered in the effort to avert a manpower shortage were the industrial training films issued by the U.S. Office of Education (q.v.) and given nationwide distri-

bution through Castle Films, Inc. (See photographs p. 385.) So great was the success of these sound motion pictures in reducing the training period in plants, by visual and oral explanation of mechanical operations, that their use was extended to England, Australia, New Zealand, South Africa, India, Russia, and other areas of the world where war equipment is being manufactured for the Allied Nations.

In Dayton, Ohio, where several automotive plants and scores of suppliers operate, a community-wide effort to handle problems locally was instrumental in lifting Dayton from a Class One critical labor area. In Detroit, establishment of the Victory Council in the autumn, brought community leaders together to work on the area's manpower problems, and a far reaching program was launched to overcome a predicted labor "deficit" in the community in 1944.

There were 835,000 wage earners on the payrolls of principal automobile plants in December, employed by plants that formerly manufactured motor vehicles and bodies. In addition, several hundred thousand men and women were employed by parts companies. The average paycheck in the industry totaled \$58.47 a week.

Standards covering the health and safety problems of women workers and of rehabilitated war veterans have been drafted by the automotive industry, through its Medical Panel of plant physicians. The Panel was convoked some time ago by the Automotive Council for War Production, as a means of pooling the experience and knowledge of the industry. It is studying such matters as industrial fatigue, prevention and cure of dermatitis, standards in dealing with pregnancy of women workers, and the rating of industrial jobs suited to employment of disabled war veterans and handicapped persons. The practice of sharing and exchanging medical and health information among the member companies is merely an extension of the industry's general wartime policy of pooling ideas. As in the case of exchange of data on manufacturing practices that has so greatly contributed to output of war products, this new collaboration to promote the well-being of workers is one that is expected to profit the nation as a whole.

On the highway side, more than 24,000,000 cars continue to operate, supplying essential transportation needs, nearly two years after the production of passenger cars was suspended. Evidence of the necessity of passenger cars was pointed up by a survey of employees in 94 war plants, which showed that 73 per cent of them drove to work. About 85 per cent of the mileage chalked up by war workers is necessary driving, with more than half of it expended in going to and from work.

With the rationing of gasoline because of demands for high-octane fuel, and other exigencies of war, improvements have been brought about in petroleum products utilized for motor transport that eventually will prove of benefit to the motorists. (See CHEMISTRY.) Outstanding among these is the fluid catalytic cracking process which the M. W. Kellogg Company had an important share in developing. Indications are that these improvements will make for a more economical motor fuel in the postwar period. (Also see PETROLEUM ADMINISTRATION.)

Despite trouble in getting replacement parts, and in the face of growing personnel needs, motor trucks made possible the maintenance of hundreds of essential services. One of the important links between the war goods manufacturer and his subcontractors, the nationwide system of motor trans-

port remained an integral part of America's transportation system. More than 54,000 communities not served by railroads are dependent entirely upon the motor truck for their daily needs. In 1943, motor transport hauled 87 per cent of the cattle going from farm to packer, it brought half of the nation's fruits and vegetables to market, and delivered all of the milk to 34 largest cities in the United States.

In view of rationing and other restrictions on passenger car movements, the nation's buses hauled a higher load during the year, intercity bus travel being 150 per cent above 1941. City bus and street-car use was up 60 per cent.

Owners of motor vehicles shouldered \$2,034,000,000 of the nation's tax load (see TAXATION) through payments for registration certificates, and because of gasoline taxes, local taxes, and tolls.

For statistics on numbers of motor vehicles, fuel consumption, etc., see the table under ROADS AND STREETS. See also ACCIDENTS; DEFENSE TRANSPORTATION, OFFICE OF; FEDERAL BUREAU OF INVESTIGATION (for thefts); INSURANCE; RAILWAYS (for competition); RAPID TRANSIT (for busses); RUBBER (for tires); STATE LEGISLATION.

BERT PIERCE.

MOZAMBIQUE (Portuguese East Africa). Area, 297,654 square miles. Population (1940 census), 5,081,266, including 5,027,591 natives and 27,438 Europeans. Chief towns: Lourenço Marques (capital) 47,390 inhabitants in 1936, Beira 12,988. In 1941 there were 691 primary schools with 92,757 students, a high school with 528 students, and 44 professional schools with 4,074 students.

Production and Trade. The chief products are groundnuts, copra, sesamum, sugar, sisal, cotton, maize, and gold. Livestock (1941): 563,223 cattle, 266,997 goats, 70,135 sheep, and 58,387 pigs. Trade (1942): imports 566,640,000 escudos; exports 339,000,000 escudos. Most of the imports came from Portugal, Great Britain, United States, and the Union of South Africa. The chief export markets were Portugal, Northern and Southern Rhodesia, Union of South Africa, and British India. There is a large transit trade in the ports of Lourenço Marques and Beira for the Transvaal, Swaziland, Northern and Southern Rhodesia, Belgian Congo, and Nyasaland. During 1941 some 947 ships of 3,598,816 tons entered the ports of Beira, Lourenço Marques, and Mozambique.

Communications. Railways (1940): 1,250 miles. Roads (1940): 17,545 miles. In 1941 there were 7,633 miles of telegraph line, 225 telegraph stations, and 6,402 miles of telephone line.

Government. Budget estimates (1942) balanced at 488,214,423 escudos. Public debt (Dec. 31, 1941), 3,884,591 escudos. The territory of Manica and Sofala (51,881 sq. mi.) which had been under charter to the Mozambique Company for 50 years reverted to the Portuguese Government at the conclusion of the charter on July 19, 1942, and was incorporated as a fourth province of the colony with Beira as its capital. The Government of Mozambique is under the control of a governor general, assisted by an executive council, and a government council made up of officials and elected representatives of the commercial, agricultural, and industrial branches of the community. Governor General, João Tristão de Bettencourt.

MTB. Motor Torpedo Boat. See NAVAL PROGRESS under *Small Torpedo Craft*.

MUNDA. See WORLD WAR.

MUNICIPAL FINANCING. See FINANCIAL REVIEW.

MUNICIPAL OWNERSHIP. See **ELECTRIC LIGHT AND POWER.**

MUNITIONS. For over-all production see **BUSINESS REVIEW** under *Armament Production*; **WAR PRODUCTION BOARD**; the charts on pages 92-93, showing small arms, artillery, ships, trucks, tanks, aircraft, ground ordnance, and signal. See also **AERONAUTICS**; **BOMBS**; **CHEMISTRY** under *Alcohol and Explosives*; **COMMUNICATIONS**; **ELECTRICAL INDUSTRIES**; **LEND-LEASE PROGRAM**; **MACHINE BUILDING**; articles on minerals, as **COPPER**, **LEAD**; **MOTOR VEHICLES**; **MILITARY PROGRESS**; **NAVAL PROGRESS**; **PHYSICS** under *Electrical Fire Director and Radar*; **SHIPBUILDING**.

MUNITIONS ASSIGNMENTS BOARD (United States and Great Britain). A supporting agency to the Combined Chiefs of Staff (q.v.) created by the President of the United States and the Prime Minister of Great Britain on Jan. 26, 1942. Chairman, Harry L. Hopkins. For details, see 1943 YEAR BOOK, p. 162.

MURDER AND MANSLAUGHTER. See **PRISONS.**

MUSCAT AND OMAN. See under **ARABIA.**

MUSEUMS. See **ART.**

MUSIC. The second year of the United States war against the Axis powers brought no one sensational or outstanding musical event to parallel the much publicized and highly dramatized performance of the Shostakovich Seventh Symphony in the summer of 1942. However, many occurrences of various natures proved to be not lacking in interest and, taking into consideration the dislocations caused by inductions into the armed forces, musical affairs during the year 1943 in this country showed a remarkable and gratifying vitality.

Perhaps the most significant happening of the year was the unionization of the Boston Symphony Orchestra whose 105 musicians and their conductor, Serge Koussevitsky, became—after holding out for many years—members of Local No. 9 of the American Federation of Musicians. From the early days of its founding by Major Higginson the organization has struggled valiantly against unionism, and of all the great symphony orchestras in the United States the Boston Symphony, alone among about sixty such, retained its independence.

While this capitulation constituted a major triumph for "the Little Caesar of American Music" as James C. Petrillo has been called, the latter's victory had something of a Pyrrhic quality about it owing to the insistence upon certain discretionary powers by the Trustees of the great New England orchestra. Important concessions were obtained by this Board, among the most important being that of the right to engage musicians from any part of the country and not just those under the jurisdiction of the local union. This concession was an important and a far-reaching one as it entailed the revision of certain by-laws of the Federation itself—a revision which from now on will allow not only the Boston Symphony but all other major orchestras of this country the privilege of hiring such players as they see fit, regardless of whether or not they happen to be under any specific local control.

The liquidation of the Work Projects Administration throughout the country caused the disbanding of many orchestral organizations, large and small. The United Service Organizations, however, have been able to absorb many musicians released by those groups, many of which had already been seriously depleted by inductions into the armed forces of the country, and numerous orchestras and

bands have been established at or near the more important Army and Navy training centers. This branch of the U.S.O. not only assembles orchestras and bands but trains conductors for them in addition to arranging tours of the various camps for top-ranking musical artists as well as those of lesser renown.

The celebration of its diamond jubilee by the Peabody Conservatory of Music in Baltimore was an event of prime interest in the annals of Musical Education in the United States. Founded in 1868 by George Peabody, this institution has never deviated from the high standard established by its first Director, Lucien R. Southard. It is interesting to record that the sum allocated for its annual upkeep at that time was five thousand dollars! Mr. Southard was succeeded three years later by Asger Hamerik of Copenhagen, formerly associated with Hector Berlioz in Paris whose only pupil he claimed to be. The Conservatory soon rose to musical prominence under Mr. Hamerik's direction, such renowned musicians as Anton Rubinstein and Peter Ilyitch Tchaikowsky personally conducting their works at a series of concerts given by the conservatory. Resigning in 1898, Sir Asger Hamerik (knighted by the King of Denmark for his services to music) was succeeded by Harold Randolph who remained its Director for nearly thirty years until his death in 1927. Among the distinguished members of the faculty under his regime were Otis B. Boise, Emmanuel Wad, Ernest Hutcheson, Howard Brockway, Harold Phillips and Gustav Strube. Otto Ortmann was chosen to succeed Mr. Randolph, continuing in office until 1941 when the present incumbent, Reginald Stewart, took his place. Long recognized as the principal musical institution in the South, the Peabody Conservatory of Music still carries on the tradition and holds to the high ideals of musical education originally formulated by its distinguished Founder.

The American Federation of Musicians, having succeeded in unionizing the Boston Symphony, signed a contract in October with four Radio Transcription firms releasing them from the ban on making recordings imposed upon all firms during the summer of 1942 by Mr. Petrillo. This ban, it will be remembered, forbade all Federation musicians from making mechanical reproductions, transcriptions, and records for radio broadcast, Mr. Petrillo's argument being that increased facilities for mechanical reproduction and the popularity of the ubiquitous Juke-Box were seriously interfering with the chances for professional employment among musicians. The ban caused such widespread indignation that even Elmer Davis, Director of the OWI, endeavored to get Little Caesar to rescind the order but without success. The Department of Justice, charging violation of the Sherman Anti-Trust Act, applied for an injunction against the enforcement of the order, but the suit was dismissed on the ground that this was a labor dispute.

The transcription firms which signed the above-mentioned contract are C. P. MacGregor, Lang-Worth Feature Programs, Inc., Standard Radio, Inc., and Associated Music Publishers, Inc., of which Muzak, Inc., is an affiliate. A few weeks previously the A.F. of M. had come to an agreement with Decca Records, Inc., and its transcription-making affiliate, the World Broadcasting System, Inc. Both the Decca and the newer contracts call for payments to the union's Employment Fund—3 per cent of the gross revenues of the business, which Mr. Petrillo claims is what he has been demanding all along. Two other transcription firms,

the Empire Broadcasting Corporation and the WOR Recording Studios, have also signed contracts with the union.

The whole business has been, and still is, both complicated and exasperating. In spite of the undoubted justice of some of the claims put forward by Mr. Petrillo, the high-handed, dictatorial, and irritating methods employed by him have antagonized thousands of music-lovers throughout the country—press and public uniting to protest against the methods and manners of the man who considers himself the Czar of American Music.

The New York Philharmonic Symphony after two years of being lobbied from one conductor to another will once more have a maestro of its very own. The new occupant of its historic podium is none other than Artur Rodzinski who for the last ten years has directed the Cleveland Orchestra. In his announcement of this appointment on Dec. 28, 1942, Marshall Field, president and chairman of the board of directors of the Philharmonic-Symphony Society, stated that Dr. Rodzinski would assume not only the duties of Conductor but those of Musical Director as well. This represents a departure from recent practice as all Philharmonic conductors of the last few years have been responsible to the board of directors in matters pertaining both to programs and personnel.

To patrons of the Philharmonic this change in policy was most welcome. During the last two years this orchestra has had no less than 12 conductors—a situation fraught with peril for any first-class body of players; continually pulled this way and that, these musicians have had a difficult time of it, being forced to adapt themselves overnight, so to speak, to brand-new conductors, each of whom had his own interpretations to put forward. The result was exactly what might have been expected—the musicians soon lost all sense of being an entity and speedily developed into rugged individualists, so much so in fact that the Philharmonic began to get an unfortunate reputation among visiting conductors.

That such conditions actually existed was made clear to the public by the blast of publicity given to the dismissal of fourteen high-ranking players in an announcement made by Mr. Field in February, 1943, in which he stated that these dismissals were being made in accordance with specific recommendations of the new musical director, Dr. Rodzinski. The manner of the announcement brought a storm of protests from certain of these artists, among them Mishel Piastro who had for many years been Concertmaster of the orchestra. Mr. Piastro was quoted as saying that he was being used as a scapegoat for the management's past mistakes. A formal complaint was made to Local 802 of the American Federation of Musicians demanding a union trial for Dr. Rodzinski, the charges being that he had disparaged the reputations of fellow union members. As conviction on such charges would have debarred Dr. Rodzinski from conducting any union orchestra in the country, the situation was a delicate one, even for the A.F. of M., which was reluctant to become involved in a dispute with the Philharmonic directors. After several weeks of discussion a settlement was reached, the Union sustaining the right of the Philharmonic not to renew the contracts in question, and the board of directors reinstating at Dr. Rodzinski's request 5 of the 14 musicians slated for dismissal. Mr. Piastro, however, was not one of these, and the post of concertmaster was given to John Corigliano, his former assistant. With its present distinguished conductor and musical di-

rector, it is expected that the reorganized Philharmonic will not be long in regaining its former high estate.

The New York Music Critics' Circle gave its second annual award for the finest orchestral work by an American composer performed in New York during the 1942-43 season to Paul Creston for his Symphony No. 1, Op. 20. This work was one of the five selected by the Circle for reperformance, these compositions being broadcast by the N.B.C. Orchestra at two concerts on May 23 and 30 respectively with Frank Black conducting. Mr. Creston's symphony was first presented in New York by the Philadelphia Orchestra at Carnegie Hall under the direction of Eugene Ormandy. The composer had also been awarded a grant of \$1,000 by the American Academy of Arts and Letters the month before.

In connection with the New York Music Critics' Circle, it is interesting to note that, although only two years old, its recommendations of works for reperformance has aroused such interest throughout the country (particularly since the Broadcast Concerts above mentioned) that plans are being considered whereby affiliated Music Critics' Circles may be formed in the various larger cities with the idea of their participation in the selection of works for rehearsing and the conferring of the final awards. The plan, while it presents many practical difficulties, is one well worthy of consideration and it will be interesting to see if it can be satisfactorily worked out.

The first Pulitzer prize in Music was awarded to William Schuman for his "Secular Cantata No. 2—A Free Song." This work was performed by the Boston Symphony and has been published by G. Schirmer, Inc. The award was a cash prize of \$500 instead of the scholarships previously granted and is only one of many awards and citations won by Mr. Schuman, among them being the first Town Hall League of Composers award in composition (1939), two successive Guggenheim fellowships (1939-40), and the first annual award of the New York Music Critics' Circle.

Guggenheim Fellowships were granted to five musicians: Normand Lockwood, Arthur Kreutz, and Harry Patch, for composition; Bertrand H. Bronson, to prepare a study of English and Scottish popular ballads, and Colin McPhee, to complete a book on the music of Bali. In addition, Martha Graham was awarded a fellowship to compose dances on American themes to music by Aaron Copland and Carlos Chavez, both former Guggenheim Fellows.

Artists. The return of Marjorie Lawrence to the operatic and concert field after nearly two years of absence was an event of outstanding interest in musical circles. Stricken with infantile paralysis in Mexico City while rehearsing for the opera season there in 1941, she has fought her way back to health with indomitable courage, her first concert last winter at the Town Hall being a genuine personal triumph, as was her reappearance on the stage of the Metropolitan Opera House as Venus in *Tannhaeuser*, a role in which she can remain seated throughout as she does when appearing in concert or as soloist with the orchestras. At a testimonial dinner given in her honor at the Town Hall Club a letter arrived by special messenger from the White House—a letter of congratulation "from an old veteran to a new recruit" signed by Franklin Delano Roosevelt.

An important debut at the Metropolitan Opera House was that of James Melton who made a successful first appearance there as Tamino in *The*

Magic Flute. An unknown young singer, Marie Wilkins, though not officially of the company at the time, made an "emergency debut" in the title role of *Lakme* owing to a sudden indisposition on the part of Lily Pons, achieving thereby a well-deserved success.

Death took a heavy toll among the Musical Great in 1943. The famous Russian composer, conductor and pianist, Sergei Rachmaninoff, died in New York three days before his seventieth birthday. Albert Stoessel, composer, conductor, and violinist, collapsed and died on the stage while directing a concert at the American Academy of Arts and Letters. Among other well-known musical figures who succumbed this year were: Alice Nielsen, famous star of both light and grand opera at the turn of the century; Milka Ternina, the great Wagnerian singer and the Metropolitan's first *Kundry*; Maria Gay Zanatello, artist and teacher, whose *Carmen* shocked and delighted New Yorkers years ago; Sigrid Onegin, the Swedish contralto, former Metropolitan artist; Clara Novello Davies, English singer, teacher, and conductor; Henry E. Dixie, light opera star of the eighties and nineties, later known as an actor; Victor Harris, conductor, teacher and composer; Elsie Houston, the Brazilian soprano, unrivalled for her interpretations of South American folk-songs; Arturo Buzzi-Peccia, Italian composer and teacher; Timothée Adamowski, former first violinist of the Boston Symphony and founder of the Adamowski Quartet; Nathaniel Dett, Negro composer and conductor, former head of the music department at Hampton Institute, Virginia; Arthur Finley Nevin, composer, whose *Poia* based on an Amerind legend was the first American opera to be performed at the Berlin Royal Opera.

Opera. That opera still retains its hold on the great public notwithstanding the steadily increasing popularity of ballet was clearly demonstrated during the 1942-43 season—not only in such established operatic centers as New York, Philadelphia, Chicago, and San Francisco, which for years have supported an opera season, but among the smaller cities in which various enterprising impresarios have offered their operatic wares. It would be hard to overestimate the awakening interest aroused throughout the country by the Saturday afternoon broadcasts from the Metropolitan Opera House, and those musical snobs who have been decrying music-drama as a bastard form of art, long since dead, must be somewhat embarrassed by the antics of this extremely lively corpse.

Interest in native American operas, despite the Olympian indifference evinced towards them by our country's premier lyric theater, has sprouted and grown to such an extent that musical institutions and independent groups have taken matters into their own hands and are staging on their own numerous operatic works by native-born American composers. While many of these productions are restricted for lack of financial resources to bare essentials of scenery and costumes, many are expertly staged and sung, frequently with some distinguished opera-singer as guest-artist. This is all to the good, and even the layman is beginning to question the oft-repeated dictum to the effect that American composers cannot write serious operas—particularly when, once outside one or two of our principal opera-houses, he sees them popping up like mushrooms all over the countryside.

The Metropolitan Opera House in New York has at long last begun to realize that the old order has changed and that a new type of audience has arisen. Gone is the ancient glamor of the Golden Horseshoe and (except for Opening Night

and a very few gala performances) dinner-coats for men and simpler evening frocks for women have now become the order of the day. Wartime restriction on private cars and the difficulty of procuring taxis have much to do with all this, it is true, but the change goes deeper than such externals—the great music-loving public has discovered the opera and intends to keep it.

Last season at the Metropolitan proved this. Not for many years have the audiences there been as large and as obviously interested in what was going on on the stage. Night after night during the latter part of the season, capacity houses and standees packed in like sardines reminded old stagers of the days of Enrico Caruso, Geraldine Farrar, and Toscanini—and that despite the fact that the Metropolitan has no such vivid personalities to offer at the moment. Interest was not confined to any one type of opera or composer. Mozart's *Figaro*, *Don Giovanni*, and *The Magic Flute* (the last sung in English and a success for the first time in years) shared popularity with the operas of Wagner, Verdi, and Puccini; *Carmen* took a new lease on life, *Rosenkavalier* was heard four times, and that former outcast of the house, *Salome*, reestablished herself, if not as a respectable woman, at least as an undoubted box-office attraction as sung, acted, and danced by Lily Djanel.

Lucia di Lammermoor was dusted off and treated to new costumes and scenery. *Boris Godunoff* was revived with Ezio Pinza (released from governmental duress) in the title-role which was also sung later on by Alexander Kipnis. *Tristan und Isolde*, after a season's absence, brought forward Helen Traubel, whose Irish princess was superbly sung but less convincing dramatically. A complete "Ring-Cycle" was given as well as two performances of *Parsifal*—the anti-Nazi sentiments of the audiences not extending to the works of German composers or their language as was the case in 1917-18. The opera receiving the largest number of performances was Verdi's *La Traviata* (seven altogether) with Puccini's *La Bohème* not far behind. Wagner led in the number of his operas performed, which was seven, though Verdi, with four works presented, tied with him—each receiving a total of twenty performances.

Among the Metropolitan conductors, Sir Thomas Beecham, Bruno Walter, and Erich Leinsdorf held their own, while two newcomers, Cesare Sodero and George Szell, proved valuable additions to the organization, the latter by his brilliant reading of the *Salome* score having had much to do with the success of that opera.

The season extended to sixteen weeks with the addition of a supplementary week, after which the company made its annual tour, its appearances in Philadelphia, Chicago, Cleveland, and Rochester being among the most successful ever undertaken by the Metropolitan. In New York, the reduced admission prices were considered partly responsible for a "broader popular appeal" according to the report of Edward Johnson, general manager of the Metropolitan Opera Association. "In point of enthusiasm," he stated in his annual report to the board of directors, "as well as general artistic achievement the season just ended has been the most successful of the present administration."

The New Opera Company, entering into its second season, scored a smash hit with its production of *Rosalinda*, the Reinhardt-Korngold version of Johann Strauss's *Fledermaus*. Produced outside the regular subscription series, this operetta is now in its second year as a straight-run Broadway spectacle. Carried over from its first season were *The*

Queen of Spades by Tchaikowsky and Offenbach's *La Vie Parisienne*, both in English, and Verdi's *Macbeth*, sung in Italian with Fritz Stiedry conducting. Walter Damrosch's opera *The Opera Cloak* and a revised version of *The Fair at Soro-schinsk* by Moussorgsky, also given in English, completed the company's repertoire. Pergolesi's *La Serva Padrona*, in a special English version by Felix Brentano, and Paul Hindemith's curious little operatic work *There and Return* being presented as extra-curricular offerings at "A Five O'Clock Concert" on the stage of the 44th Street Theatre between regular performances of *Rosalinda*. Also sponsored by the New Opera Company is the current production of Lehar's *Merry Widow*, a sumptuous revival with choreography by George Balanchine, which bids fair to equal the success of the Johann Strauss operetta.

Other operatic productions in New York included three works by American composers—*The Mother* by Joseph Wood and *Solomon and Balkis* by Randall Thompson, both put on by the Juilliard School of Music, and Ernst Bacon's *A Tree on the Plains*, a story of cowboy life, presented by the Columbia Theatre Associates at Brander Matthews Hall. Also of note was the radio broadcast of Italo Montemezzi's newest opera *L'Incantesimo* with words by Sem Benelli, which was performed by the N.B.C. Orchestra in October, this broadcast being the first hearing of the work.

The Chicago Opera Company—after a five-week season last year which enlisted the services of numerous Metropolitan artists, and during which was presented a novelty, Moniusko's *Halka*, sung in Polish—has suspended activities for the current season, the difficulty of assembling an adequate company of first-rank singers plus the disintegration of the Chicago opera chorus being given as the reason for this action. The resignation of Fortune Gallo who has been general manager of the company for the last two years was another factor in the situation, Mr. Gallo feeling that his own organization, the San Carlo Opera Company, required his entire attention. Plans are reported afoot for a season in 1944.

San Francisco's War Memorial Opera House was filled to capacity for the opening of that city's 21st annual opera season in October, 1943; the initial offering was *Samson et Dalila* and, as heretofore, artists from the Metropolitan were predominant. The Philadelphia Opera Company under the artistic direction of Sylvan Levin not only gave opera in its own habitat but is taking certain of its more popular productions on tour. Established six years ago, this organization devotes its energies to opera in English at popular prices with casts composed of young American singers, emphasis being placed upon coordinated ensemble rather than a star system.

Operatic road companies scored notable successes up, down, and across the country during 1943, and prospects seem even brighter for the present season. Among these roving troupes are those of Charles Wagner, Salvatore Baccaloni, the Nine O'Clock and La Scala opera companies, together with the Philadelphia and San Carlo organizations mentioned above.

Ballet and Dance. Ballet, long an adjunct of opera, has now established itself as a distinct art-form. Curiously cold to it for many years, the American public (which stayed away in droves when the great Nijinsky was appearing with the original Diaghileff company at the Metropolitan Opera House in 1916) has now taken ballet to its bosom. Two top-ranking troupes carried Russian, Ameri-

can, and other ballets the length and breadth of the land in 1943—the *Ballet Theatre* and the *Ballet Russe de Monte Carlo*. The former, an all-American organization at the start, now possesses many of the finest dancers of the original Monte Carlo group, including Leonide Massine—these artists having come over to the Ballet Theatre soon after the internecine war which split the Monte Carlo company in two. One of the greatest ballet organizations in the world today, the Ballet Theatre played two long and brilliantly successful engagements at the Metropolitan Opera House during 1943, among the new works presented being *Romeo and Juliet* with the Delius score, *Dim Lustre*, danced to music by Richard Strauss, *Fair at Soro-schinsk*, a dance-version of the Moussorgsky opera which would considerably astonish the composer were he alive, and *Pictures of Goya*, a series of Spanish dances by Argentinita and her own group with music by Granados.

The Monte Carlo troupe, headed by David Lichine, was on view at the Broadway Theatre and toured the country with great success in a repertoire of classic and modern ballets such as *Giselle*, *Les Sylphides*, *St. Francis*, and *Rodeo*, and have announced four new productions for the present season. Katherine Dunham and her company in a *Tropical Revue*, Carmen Amaya and her Gypsy Dancer Troupe, Argentinita and Pilar with their Spanish Dance Ensemble, Martha Graham and her group, Jacques Cartier, actor-dancer, Carola Goya, Paul Draper and Larry Adler, dancer and harmonica-virtuoso respectively, and numerous other dancers and dance-groups are drawing large and enthusiastic audiences in New York and elsewhere, proving beyond a doubt the tremendous popularity of what is perhaps the oldest form of entertainment known—The Dance.

Orchestras. Orchestral activity was tremendous throughout the country last season and that of 1943-44, now well under way, bids fair to equal it. Apart from the better-known orchestras, symphonic groups are springing up everywhere, particularly in the smaller communities. Curtailment of their annual tours by many of the major orchestras due to wartime travel restrictions may quite possibly have something to do with this. American works are becoming more and more popular with conductors and audiences, the playing of compositions by local composers by the smaller organizations throughout the country serving to bring these works to the conductors of the more established orchestras. An interesting experiment is being conducted by Dr. Rodzinski of the New York Philharmonic Symphony, who is devoting certain periods of rehearsal-time to the reading through of unplayed works by native American composers before small audiences of specially invited individuals, the names of the composers being withheld, after which a straw vote is taken as to whether or not (in the opinion of those present) these works merit public performance. While exact statistics are not available as to the number of native works performed in the 1942-43 season, reports from 19 major orchestras reveal that out of 1,398 works played by them during the season 151 were by American composers—the New York Philharmonic, under various conductors, leading with 25.

The summer season of 1943 was an unusually healthy one. Open-air concerts of symphonic works, operas, and ballets drew large audiences from coast to coast, these performances having come to be considered an important factor in the morale of the armed forces and civilians alike. The Stadium Concerts in New York drew thousands, the new

stage being a great improvement over the one blown down last year. Other performances were those of the Robin Hood Dell in Philadelphia, Ravinia Park near Chicago, the Hollywood Bowl, and the Watergate Concerts in Washington. Boston, Chicago, Cleveland, and various other cities had their usual summer series of symphonic concerts, and summer opera was on view in St. Louis, Chautauqua, and the Cincinnati Zoo.

The State of North Carolina, through its senators and representatives in Raleigh, voted in March to subsidize the North Carolina Symphony. This organization, now ten years old, is unique in that its personnel is drawn from fifteen communities throughout the State and includes music-teachers, students, writers, housewives, and factory-workers; these players are rehearsed as sectional units by the conductor, Benjamin Swalin, who brings them together for final all-unit rehearsals a few days before each concert.

A grandiose scheme, hatched out by James Petrillo with the blessing of President Roosevelt, to present all of the nation's major orchestras in union-sponsored concerts in small communities encountered opposition, ironically enough, from a branch of Mr. Petrillo's own organization—700 members of Local 802 in New York City signing a petition demanding that these concerts be played by unemployed or partially unemployed musicians rather than by members of leading orchestras already earning good wages. Another snag was met when the New York Philharmonic, backed up by other major orchestras, stipulated as one condition for participation the lifting of Mr. Petrillo's ban on symphonic recordings. One concert, however, was given in Poughkeepsie, N.Y., in September, and another in Kingston, both with the Philharmonic orchestra.

Contracts providing for commercial sponsorship of their radio broadcasts were made by two of the nation's leading orchestral organizations, the New York Philharmonic-Symphony Society and the N.B.C. Orchestra, while rumors are in the air that the Boston Symphony and the Philadelphia Orchestra soon may follow suit. Big business firms are recognizing the prestige to be gained from association with such famous organizations and the orchestras in their turn will reap a much-needed financial benefit. Just to what extent advertising will be allowed to intrude during these broadcasts remains to be seen—and heard; so far such sponsors have displayed heroic and gratifying restraint.

In Canada, the Toronto Philharmonic under the direction of Sir Ernest MacMillan gave, in addition to its regular subscription series, a season of concerts during the summer. Together with the Mendelssohn Choir (of which he is also conductor), Sir Ernest presented several major choral works, among them Handel's *Messiah* and Verdi's *Requiem Mass*. Visiting orchestras augmented the symphonic concerts and numerous distinguished artists were heard as soloists or in recital. Montreal's music festival was dominated by its opera performances, the most important being Sir Thomas Beecham's presentation of *Tristan and Isolde* with Marjorie Lawrence as Isolde, certain departures from the usual dramatic procedure for the singer's benefit in no wise marring the performance as a whole, in which she achieved a notable artistic triumph. Jeanette MacDonald, the popular screen favorite, was heard as *Juliette* in the Gounod opera; and *The Marriage of Figaro* was also done under the direction of Sir Thomas Beecham. In addition the Montreal Festival sponsored a dramatic version of Bach's *St. Matthew Passion*, staged by Dr. Graf

who based his action on Albrecht Durer's pictures of the Trial and Crucifixion of Christ.

In Buenos Aires, the Teatro Colon's official grand opera season came to a successful close in September with a performance of Strauss's *Elektra*, the company being largely made up of artists from the New York's Metropolitan. The Colon Orchestra functioned as usual under Albert Wolff, Fritz Kleiber, and other conductors, and Shostakovich's Seventh Symphony was given its Buenos Aires premiere. Orchestral concerts were given in Rio de Janeiro by the Brazilian Symphony Orchestra under the direction of Eugen Szenkar, while for its opera season it depended, like Buenos Aires, to a great extent upon singers from the Metropolitan Opera House.

In Mexico City, Carlos Chavez and his Mexican Symphony Orchestra presented numerous native works as well as compositions by American composers; assisting Mr. Chavez this year were three prominent Mexican conductors and composers—Blas Galindo, Jesus Reyes, and Eduardo Hernandez Moncado. An opera season was held under the auspices of the National Opera Association of Mexico, just founded, of which Emilio Portes Gil, former president of Mexico, is the president; this season was opened with Beethoven's *Fidelio* under the musical direction of Erich Kleiber. The Havana Philharmonic, of which Massimo Freccia is musical director, gave a series of fifteen concerts, Eugene Ormandy of the Philadelphia Orchestra making a guest appearance while Artur Rubinstein and Mischa Elman were among the soloists heard.

Choral and Chamber Music. Two presentations of Bach's *St. Matthew Passion*, surprisingly different in character, were given during the same week in New York City—one under the musical direction of Leopold Stokowski at the Metropolitan Opera House, the other under the aegis of Bruno Walter at Carnegie Hall. Mr. Stokowski's version was done in collaboration with Robert Edmond Jones and George Balanchine, scene-designer and choreographer respectively, the purpose being to present the work as a "miracle-play" with settings and costumes, together with about forty mimes headed by Lillian Gish. The work was much cut and, needless to say, critical opinion was divided over what was to many a touching and impressive performance. The concert version of Mr. Walter was given uncut, lasting from 6:30 until 10:30 p.m. with a 45-minute intermission between the first and second parts. He had the great advantage of having the Philharmonic Symphony plus the Westminster Choir supplemented by the Junior Choirs of the Pius X School of Liturgical Music, while Mr. Stokowski had the student orchestra of the Juilliard School and players from the High School of Music and Art and Columbia University to train and direct, to which was added the Collegiate Chorale, whose excellent work under Robert Shaw has made it an organization of the first rank.

A simple and appealing presentation was the same composer's *Passion According to St. John*, directed by Paul Boepple and sung by the Dessoff Choir and the Chapel Choir of Princeton University at Carnegie Hall—a performance which, without benefit of a virtuoso orchestra, enlisted among other well-known musicians the distinguished harpsichordist, Ralph Kirkpatrick. The New York Oratorio Society gave its annual *Messiah* under the late Albert Stoessel's direction at Carnegie Hall, and the People's Chorus of New York held its fifteenth yearly festival under Mr. Camilieri's leadership at that auditorium Christmas Night.

Chamber Music groups were active in New York

and throughout the country, among them being the Budapest, Busch, and Kolisch Quartets, the Washington Chamber Music Guild Quartet, and the famous Pro Arte players, formerly of Belgium and now affiliated with the University of Wisconsin. A series of five concerts devoted to American chamber music was presented at the Museum of Modern Art in New York under the joint sponsorship of the Juilliard School and the Society for the Publication of American Music. The New Friends of Music, restricting their programs to the classics, had a prosperous season at the Town Hall and launched an all-Beethoven series for 1943-44. The Serenade Concerts at the Museum of Modern Art brought forward many interesting novelties by Virgil Thomson, Paul Bowles, the late Silvestre Revueltas, and others, while Frederique Petrides and her Orchestrette were again heard at the Carnegie Chamber Music Hall. The Radio Corporation of America through its RCA Victor Division is offering two prizes of \$1,000 each for two string quartets—one by a composer from the United States or Canada, the other by a Latin American.

Festivals. Although the International Society for Contemporary Music had to abandon its festival planned for Los Angeles, and the Berkshire Music Festival could not be held on account of gasoline rationing and the ban on motor-travel, there was no dearth of other festivals. The 36th Bach Festival was held in Bethlehem, Pa., in May—the B Minor Mass and two programs of shorter works being given. Ann Arbor's Golden Jubilee Festival, also in May, attracted large crowds with the Philadelphia Orchestra and many distinguished soloists, among them Fritz Kreisler. Verdi's *Manzoni Requiem* (which closed the first festival 50 years ago) was given at the final concert, being sung by the Choral Union of 300 mixed voices whose director, Hardin Van Deursen, shared honors with Eugene Ormandy. Chicago's fifteenth annual festival was held in Soldier's Field before an audience of close to 100,000 in August, a feature of this festival being a band of 1,000 accordionists in addition to American and Canadian military bands and choral groups. These and countless other festivals throughout the country testified to the ever-increasing interest in music which wartime conditions have in no way diminished.

Music in Europe. In wartime England, the National Gallery's lunch-hour concerts organized three years ago by Dame Myra Hess, continued their almost phenomenal success. In spite of being blitzed, leaking roofs, and the myriad inconveniences encountered since their inception, these concerts are more popular than ever with the democratic audiences which support them. Up to the spring of 1943, over 800 concerts had been given before well over 340,000 persons—above \$64,000 having been paid out from the proceeds to members of the musical profession, the greater part of this sum coming from the nominal admission fee of 20 cents.

The Promenade Concerts with the BBC Orchestra under Sir Henry Wood and his two associate conductors, Sir Adrian Boult and Basil Cameron, went into their 49th summer season, attracting large crowds night after night. Musical activities in the provinces seem to have exceeded even those of last year. Touring orchestras, operatic companies, and distinguished artists covered large areas from Land's End to John O'Groats—the dislocations due to wartime conditions appearing to have increased rather than to have diminished the musical energies of the British. In Manchester, the famous Hallé Orchestra, blitzed out of its own concert hall, is entering its 86th year under its newly-appointed

permanent conductor, John Barbirolli, who will direct the majority of the 200 concerts scheduled at home and on tour. Opera was in view at Sadlers Wells Theatre in London, while from Wales came news of its annual Eisteddfod, a festival of choral-music and drama, which was given there in August.

Little musical news seeped out from the Axis and Axis-occupied countries. From Italy came the sad news of the destruction of Milan's famous and irreplaceable opera-house, La Scala, bombed by air forces of the United Nations before the capitulation of that country. Rumors to the effect that the San Carlo Theatre in Naples had been demolished by the retreating Nazis are still unconfirmed. From Occupied France comes the report (via German-controlled radio) that Raoul Laparra, composer of the well-known *La Habanera* and other operas, was killed last spring in the American bombing raid on the Renault Works just outside Paris.

Soviet music, having celebrated its twenty-fifth anniversary in 1942, has now become a most important factor in European music. Symphonic works and operas reflecting the artistic and political philosophy of revolutionary Russia are achieving enormous success. While Dmitri Shostakovich continues to hold the spotlight outside Russia, other composers, less internationally known, are rising to almost equal prominence within the Soviet Union. Serge Prokofiev and Nicolas Miaslovsky might be called old-timers, but among the younger composers, Aram Khachaturian, Ivan Dzerzhinsky, Tokhon Khrennikov, Michael Gnessin, Dmitri Kabalevsky, and Maximilian Steinberg, son of Rimsky-Korsakov—to name only a few—are making Soviet musical history. Older composers such as Reinhold Glière, Alexander Goedicke, and Sergei Vassilenko, now in their late sixties, have joined the younger generation in the united effort to develop the new Soviet music. Operas and symphonies are being turned out by the dozen while cinema music is enlisting some of the finest talent available, an outstanding name in this field being Isaac Dunajevsky whose scores form an integral part of the film they accompany; Nikolai Krukoff is another composer whose work in this line has achieved distinguished success.

The Royal Opera in Stockholm has given Sweden a marked prominence in European operatic circles, such internationally famous singers as Gertrud Wettergren, Nanny Larsen-Todsen, and Jussi Björling—Swedish artists well known here—being members of this organization. In Switzerland, Zurich and Basle report musical seasons, and scattered information from various sources brings news of musical activities in Axis and Axis-controlled countries—news which, meager as it is and perhaps unreliable, gives ground for the belief that music is not entirely dead in the occupied areas.

The Palestine Orchestra entered upon its seventh season in Tel Aviv while operas and operettas, sung in Hebrew, were presented by the Palestine Folk Opera; new works by native composers were heard, among them being Joseph Kaminsky's *Ha-Aliyah*, a composition in variation form on a traditional Jewish theme. Other musical activities consisted of chamber music concerts and numerous recitals. See PHILANTHROPY under *Juilliard Foundation*; RADIO PROGRAMS.

1 EUGENE MACD. BONNER.

MUSTERING-OUT PAY. See SELECTIVE SERVICE SYSTEM.

MUTUAL ASSISTANCE PACTS. See CZECHOSLOVAKIA, UNION OF SOVIET SOCIALIST REPUBLICS, under *History*.

MYCOBAN. See article on *CHEMISTRY* under *Foods*.

NANYO. See *JAPANESE PACIFIC ISLANDS*.

NARCOTIC DRUGS CONTROL. Decisions announced on Nov. 9, 1943, by the Netherlands and the British Governments, to suppress opium smoking in their far eastern colonial empires following liberation of these areas from Japanese domination, constitute a major development in the field of international drug control. This action should cut off illicit traffickers from postwar access to what have in the past been leading sources of supply.

Recognizing the necessity of stringent control to prevent a possible postwar increase in addiction such as occurred after the first world war, the United States Government is pressing diplomatic discussions looking to an international agreement prohibiting the cultivation of the opium poppy except for medical and scientific needs.

International control over legal movements of narcotic drugs continues to function through the two independent narcotic bodies operating under International conventions, the Supervisory Body and the Permanent Central Opium Board. The headquarters of these bodies are located in Geneva, Switzerland, but branch offices have been maintained in Washington since the outbreak of the war.

National Control. Strict measures for control by the Treasury Department's Bureau of Narcotics of distribution of war-essential narcotic drugs was instituted on May 31, 1943. The Bureau's conservation Order No. 1, issued on a War Production Board directive, permitted assignment of quotas for civilian requirements to primary extractors, manufacturers, and wholesalers, as well as specific quotas for meeting military needs.

Court decisions in 1943 greatly strengthened the Bureau in its efforts to prevent diversion of medicinal narcotics into the illicit traffic. The U.S. Circuit Court of Appeals and subsequently the U.S. Supreme Court upheld conviction of a distributor who sold directly to a physician engaged in illegal dispensing of narcotics to addicts.

There was an increase in the amount of illicit narcotics seized in internal traffic during 1943, as well as an increase in the amount of these drugs seized at ports and borders. The combined total of seizures (for the fiscal year 1943) was 9,933 ounces, as compared with 2,445 ounces seized in the 1942 period. However, seizures in 1942 were abnormally low, and the increased seizures for 1943 were considerably smaller than the volume of a few years ago. There was a slight increase in the number of persons arrested for violation of the Federal narcotic laws, from 1,777 in 1942 (fiscal year) to 1,794 in 1943.

The relative scarcity of narcotics in the illicit trade continues. Because of the shortage of smuggled drugs, robberies, and burglaries of stocks from pharmacies or other registered establishments continue to be a problem. Cooperation of registrants in protecting this critical war material and other special measures which were taken served to reduce losses, however. There were numerous cases involving the forgery of narcotic prescriptions by addicts in attempts to obtain drugs.

Smugglers have resorted to illicit drug sources in the Republic of Mexico to an increasing degree in efforts to supply the demand in this country, and intensified enforcement efforts have been made at border points. The Government of Mexico is cooperating in the fight against this traffic. Numerous seizures, mostly in small quantities,

have been made at ports as a result of searches on vessels engaged in wartime shipping out of Asiatic ports. Oriental crew members of the vessels have been mainly responsible for this traffic.

Marihuana. There was a slight decrease in the seizures of bulk marihuana, from 14,709 ounces in 1942 (fiscal year) to 14,315 ounces in 1943. There was a decrease in the number of marihuana cigarettes from 33,954 in 1942 to 26,408 in 1943. The number of persons arrested for marihuana violations decreased from 1,090 in 1942 to 777 in 1943. In continuation of a marihuana eradication program in cooperation with State and local authorities and land owners, an estimated 4,747 acres of growing marihuana were destroyed during the fiscal year, compared to 9,742 acres the previous year.

During the year the Bureau of Narcotics supervised large plantings of marihuana to provide hemp for the U.S. Navy, and policed this project to prevent its becoming a source for illicit traffickers. See *CUSTOMS, BUREAU OF*; *LEAGUE OF NATIONS*.

H. J. ANSLINGER.

NATAL. See *SOUTH AFRICA, UNION OF* under *Area and Population*.

NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS.

An independent Committee of the U.S. Government which coordinates and conducts aeronautical research. The principal research laboratories of the Government are the Langley Memorial Aeronautical Laboratory at Langley Field, Va., and the Ames Aeronautical Laboratory at Moffett Field, Calif. The first unit of an aircraft engine research laboratory at Cleveland, Ohio, was placed in operation in May, 1942. Chairman: Jerome C. Hunsaker.

NATIONAL ARCHIVES, The. An independent establishment of the U.S. Government, created in 1934, which accepts and preserves Government records. Archivist in 1943: Solon J. Buck.

NATIONAL BUREAU OF STANDARDS. This Bureau was established by act of congress March 3, 1901. Its functions are the development, construction, custody, and maintenance of the reference and working standards used in science, engineering, industry, and commerce. The Bureau's services are available to the national and State governments and under certain conditions to private firms and individuals. It acts as one of the principal testing laboratories of the Federal government in connection with the purchasing of supplies (other than food and drugs), and conducts research in cooperation with governmental agencies and with engineering societies and trade associations.

The Bureau is made up of nine scientific and technical divisions, three divisions dealing with commercial standardization, and a special division set up as a war measure and concerned wholly with military problems. The regular divisions are the following: electricity, weights and measures, heat and power, optics, chemistry, mechanics and sound, organic and fibrous materials, metallurgy, clay and silicate products, simplified practice, trade standards, and codes and specifications. Each division consists of five to ten sections which are the working units covering specialized fields.

The Bureau's staff consists of approximately 2,300 employees and 50 research associates. The annual appropriation for the regular work of the Bureau is approximately \$2,400,000. However, the war has affected all the Bureau's activities, the majority of which are now paid for by the military

agencies. An increasing proportion of the personnel and of laboratory facilities has been transferred to war projects until it is estimated that 90 per cent are so employed. However, certain normal activities have proved fully as useful in war time as in peace. This has been true, for instance, of the standard frequency radio broadcasts which have been extended and improved, largely for the benefit of the military services. The testing of weighing and measuring equipment has increased very greatly; 30,000 master length gages, and 32,000 pieces of glass volumetric apparatus were measured and certified. The scarcity of many engineering and construction materials has been reflected in the problems submitted to the Bureau. Substitutes for metals are being sought in wood, concrete, and the plastics. Recent buildings erected at the Bureau have been fabricated from concrete and wood, using very little steel.

Following inspections of the roofs of Army buildings in many parts of the country, instructions were prepared by the Bureau outlining the conditions under which re-roofing was indicated and giving detailed methods of maintenance and repair. It is believed that several million dollars have been saved as a result of this survey.

The Bureau has demonstrated that quite often a scarce metal can be replaced by one not so high on the priorities list, possibly treated in some way to give it special properties for the work in hand. An example is the development of exhaust pipes for airplane engines made of steel coated with vitreous enamel to replace the scarce stainless steels. The necessity of conserving fuel oil has been the cause of many tests of "conversion grates" intended to make possible the use of coal in oil-burning heating boilers. Recently, tests have been made of stoves constructed wholly of ceramic materials instead of iron or steel.

The scarcity of alcohol and glycerin, customarily used in anti-freezing mixtures for automobiles, led to the marketing of various salt solutions and hydrocarbons. On the basis of tests at the Bureau which made clear the harmful effects of these materials, their manufacture was banned by the War Production Board.

The complete elimination of the usual sources of jewel bearings for electrical and other instruments has resulted in a synthetic sapphire industry in the United States. The Bureau has aided manufacturers in overcoming their many problems, and one company alone is now producing over 2,000,000 carats of spinel and sapphires a month. Crystalline quartz for the manufacture of oscillators is being tested in large quantities; 500,000 pounds were inspected during June, 1943. Supplementing this work, a research project has been started to insure maximum utilization of all grades of crystals. The number of standard samples of pure substances (used as controls in industrial laboratories) ordered during the year was 24,000; more than 150 standards are now available.

A new publication on the physical properties of metals and alloys has been prepared to replace a circular issued in 1924 and still in demand. It should be of great value to engineers who are forced to use unfamiliar construction materials during the emergency. The Bureau of the Mint was assisted in the development of new alloys and production methods for its one-cent and five-cent coins.

Many determinations of the properties of synthetic rubbers have been made, and samples of articles manufactured from these materials have been tested. The Bureau is developing standard

test procedures by which to evaluate the products of the new synthetic rubber plants, so that full utilization of every grade of material will be insured. The rubber laboratory at Belem, under the direction of a member of the Bureau's staff on loan to the Brazilian Government, is now actively engaged in a research program for increasing the yield and improving the quality of natural rubber from the Amazon district. It is believed that both the natural and synthetic products will find increasing applications.

In the course of the Bureau's work on plastic windows and enclosures for aircraft, it has been shown that a common constituent of sun-tan lotions, when incorporated in the plastic, will greatly reduce deterioration from the ultraviolet rays in sunlight and will protect the airplane's crew against sunburn.

Certain alkaline methods have been found feasible for treating low-grade bauxites and common clays so as to recover alumina of sufficient purity to meet the rigid requirements of the aluminum industry. At the Bureau's branch laboratories over 18,000,000 barrels of cement were tested for use on Government construction projects.

The War Production Board and Office of Price Administration (q.v.) have requested the Bureau's assistance in developing simplification programs intended to conserve materials and manpower. The Bureau has been associated with WPB in the development of 130 limitation and 25 conservation orders. Twenty-one Commercial Standards have been translated into Spanish and Portuguese in the interests of our Latin-American trade. An important standard affecting domestic business covers the re-treading of automobile tires.

Four circulars on elevator maintenance during the war period have been prepared by a special committee and published by the Bureau. Other results of the year's work have appeared in 222 papers by members of the staff—152 in the Bureau's own series and 70 in scientific and technical journals.

The Army-Navy production award was renewed from January 1 and again from July 1, 1943. Three stars are now carried on the Bureau's "E" pennant.

The Director, National Bureau of Standards, was one of the United States delegates to the First National Congress of Physics at Puebla, Mexico, May 3 to 8, 1943. Warren E. Emley, for over 30 years a member of the Bureau's staff and since 1926 chief of the division of organic and fibrous materials, retired Oct. 1, 1943. He was succeeded by Archibald T. McPherson, chief of the rubber section.

LYMAN J. BRIGGS.

NATIONAL DEBT. See PUBLIC FINANCE; countries under Finance.

NATIONAL DEFENSE, Council of. A Council composed of the Secretaries of War, Navy, Interior, Agriculture, Commerce, and Labor, originally created by Act of Congress, Aug. 29, 1916. The Act authorized appointment of an Advisory Commission to the Council, composed of seven persons having specialized knowledge in certain fields. Such an Advisory Commission was appointed May 29, 1940, and constituted the beginning of the National Defense Program for World War II; its functions were subsequently absorbed by the units of the Office for Emergency Management, the Office of Price Administration, and the Office for Agricultural War Relations.

NATIONAL GALLERY. See ART.

NATIONAL HOUSING AGENCY (NHA). In 1943, as in 1942, the primary concern of the National Housing Agency was war housing—the provision of housing accommodations for the workers who migrated to war industry centers. Concentration of its efforts on that problem was reflected in substantial gains during the year in the volume of war housing produced. During the first ten months of the year, 489,329 units of war housing were completed and, during October alone, 33,354 additional units were placed under construction, thus bringing the ten months' total of units started in 1943 to 392,423.

With this increase in war housing production, together with the greater use that has been made of existing structures for war housing purposes, it is possible now to say that the war housing program has reached an advanced stage. Since the start of the emergency in mid-1940, some 1,350,000 units of war housing have been completed, another 200,000 are in various stages of construction, and over 1,500,000 in-migrant war workers have been housed in existing private structures. In many localities it is possible also to say that war housing has caught up with the immediate demand.

These accomplishments were possible because during 1943 still greater integration of housing with the total war program and virtually complete conversion of the housing industry to a wartime basis were achieved. The year 1943 was the first full year of operation under the consolidated National Housing Agency, which had been formed early in 1942 to focus and direct the urban housing activities of the Federal Government. (See 1943 YEAR BOOK.) The new set-up has represented a streamlining of the organization on a functional basis. The Office of the Administrator performs the over-all, fact-finding, and planning functions which currently consist primarily of formulating war housing policy and programming war housing, including its postwar disposition. The three major constituents of the Agency perform their traditional functions, with special attention now to their relation to war housing. They are the operating arms of the Agency through which the war housing program is executed.

Federal Home Loan Bank Administration. This unit of the NHA supervises three agencies in the field of thrift and home finance.

(1) *The Federal Home Loan Bank System* functions as a credit reservoir for its 3,774 member savings and loan associations and other financial institutions which make loans for the construction, purchase, and refinancing of homes. In spite of the virtual stoppage of nonwar home building, during 1943 total lending activity of member institutions of the System exceeded that in 1942, because of an increase in loans to finance the purchase of existing houses. Member institutions strengthened their position during 1943, increasing their combined assets from \$5,658,000,000 to \$6,238,000,000, although the number of members declined slightly because of mergers. The 12 regional Federal Home Loan Banks of the System are in the strongest position in their history. Their reserves and paid-in capital rose substantially during the year and on Nov. 30, 1943, they reported the highest volume of cash and government investments since their establishment in 1932.

(2) *The Federal Savings and Loan Insurance Corporation* protects the savings of investors (up to \$5,000 each) in all Federal savings and loan associations and in State-chartered thrift associa-

tions which have applied for and been approved for this safeguard. The 2,439 insured institutions, which hold the savings of about 3,600,000 persons, generally improved their condition during 1943. Over the year the Federal Savings and Loan Insurance Corporation itself increased its assets from \$138,797,000 to \$145,619,000, and its reserves and unallocated income from \$35,025,000 to \$43,350,000.

(3) *The Home Owners' Loan Corporation (HOLC)*, established in 1933, is continuing its liquidation program which began in 1936. Original loans of HOLC, plus later advances and miscellaneous costs, totaled \$3,486,000,000. As of Oct. 31, 1943, HOLC had reduced this investment to \$1,500,000,000—or by 57 per cent—through collections on its loans and the sale of its acquired properties. Of the total of 196,000 properties securing its loans, which the Corporation has been obliged to take over since it began operations, more than 91 per cent have been sold. HOLC is also handling the publicly financed "conversion" program of NHA's wartime Homes Use Service, described below.

Federal Housing Administration (FHA). The FHA insures mortgage loans made by approved lending institutions for the purchase and construction of homes which meet its location requirements and standards of construction. It also has facilities for insuring loans for home modernization and repair, and for rental properties in large projects. Activity in these categories during 1943 was curtailed as housing swung over almost exclusively to the provision of accommodations for war workers. In order to make the insurance feature available for war housing, the National Housing Act was amended in 1941 by liberalization of the terms of obtaining FHA insured loans and by extension of mortgage insurance to specific war production areas. Authorization under this legislation has been increased to \$1,600,000,000 and war workers are given occupancy priority in the structures made available through such insured mortgages.

During 1943 construction of approximately 138,000 new dwelling units was started by private builders under FHA inspection and in conformity with FHA minimum construction requirements. All of these were in critical war housing areas. Also during the year insured loans for repairs, maintenance, and remodeling of existing structures as well as for fuel conservation through oil-burner conversion and the installation of insulation were made in the amount of approximately \$96,000,000, involving 308,000 individual properties. Total loans of all types insured during 1943 amounted to \$942,000,000 and of this amount approximately \$600,000,000 financed new dwelling construction almost exclusively for war workers.

The FHA is also the agency which processes applications for preference rating orders for the War Production Board (q.v.). During 1943 the field offices of the FHA processed applications representing more than 300,000 dwelling units in proposed privately financed projects for war workers. See SANITATION.

Federal Public Housing Authority (FPHA). This unit of the NHA is authorized to provide housing for persons engaged in war activities in localities in which the President finds that an acute shortage of housing exists or impends which would impede war activities, and that such housing would not be provided by private enterprise when needed. This includes housing for workers engaged in industries essential to the war effort, for certain military and naval personnel, and for certain em-

ployees of the Government whose duties are essential to the war effort.

The Federal Public Housing Authority is authorized to acquire land and to construct and operate projects to provide such war housing, including family housing, dormitories, and trailers. The Federal Public Housing Authority is authorized to utilize local public housing agencies in the construction and operation of such war housing projects.

The Authority also is authorized to revise contracts for financial assistance which had been entered into with local public housing agencies in connection with low-rent housing and slum clearance projects located in areas where there is a shortage of housing for persons engaged in war activities, so that these projects can be used during the war to provide necessary public housing for war workers.

Pursuant to the United States Housing Act of 1937, as amended, contracts for financial assistance (in the form of capital loans and annual subsidies during administration) to aid local public housing agencies in the development and administration of low-rent housing and slum clearance projects were entered into by the United States Housing Authority. (See 1942 YEAR BOOK, pp. 264-5.) The Federal Public Housing Authority now is administering these contracts under Executive Order 9070. As a result of the war, the construction of further low-rent housing and slum clearance projects has been suspended for the duration. To assist the war effort, projects originally constructed for low-rent housing and slum clearance purposes are being used where possible for war housing purposes.

The Authority also administers nonfarm housing projects developed by the Farm Security Administration, including three "greenbelt" communities, and some 40 rural or suburban projects for families not deriving their principal income from operating or working on farms.

As of Oct. 31, 1943, FPCHA's war-housing program totaled 573,892 dwelling units, of which 430,561 were completed and under management. The total consisted of 462,834 family dwelling units; 71,268 dormitory units; and 39,790 trailers. These units represent approximately 80 per cent of the total publicly financed war housing program. The low-rent program consisted of 132,376 family dwellings.

Coordination of war housing with the total war effort has meant complete integration of the war housing program with the basic programs of war production and war manpower. As an instrument of the manpower program, war housing is entirely correlated with the policies and findings of the War Manpower Commission (q.v.). If the Commission certifies that in-migration of war labor is essential in any given community, it is the responsibility of the National Housing Agency to provide housing for those in-migrants, according to their family and financial status. Finally, where the Commission determines that the local labor supply is sufficient for the war manpower needs, the NHA does not schedule any new housing and the War Production Board does not permit use of critical materials for housing in that community.

Similarly on the materials front, the war housing program has been integrated with the materials allocation system of the War Production Board to assure that the critical materials made available to housing will be used only for the most essential war purposes. The National Housing Agency cannot schedule new construction in

any locality except to the extent that its housing needs cannot be met through use of existing structures.

Where new construction is unavoidable, the NHA is the spokesman for the industry in obtaining the necessary materials for the total war housing program. Under WPB's Controlled Materials Plan, the NHA is a claimant agency, a status which puts housing on a par with other war production industries in seeking and obtaining materials. This status for war housing is contingent upon the NHA's effort to make maximum use for housing purposes of existing structures, and to that end the NHA has intensified its efforts through its Homes Use Service.

Conversion of the house building industry to a complete war basis has taken several forms. One of the most important has been the conservation of critical materials. Because housing competes with direct war industries for many of the materials used in its construction, the war effort has dictated that even the most essential war housing use only the absolute minimum quantities of the materials needed for ships, planes, guns, and tanks. The NHA therefore has worked closely with the industry and with other governmental agencies to eliminate every unessential use of metal, particularly, in housing construction and wherever possible to develop substitutes for the most critical items. As a result of these efforts, savings ranging from 60 to 80 per cent in use of critical metals as compared with prewar levels have been accomplished in the war housing construction program. These savings apply to both privately and publicly financed war housing accommodations.

A second method of putting war housing on an all-out war basis has been the increased use that has been made of existing structures for housing purposes. The *Homes Use Service* was organized in the National Housing Agency for this special purpose and has pursued this objective by promoting an intensive campaign to get people to share their homes with in-migrant war workers, and by promoting the conversion of existing buildings into additional accommodations for war workers. During 1943 the Homes Use Service perfected the lease arrangements for publicly financed conversions; improved techniques for cooperation with private real estate brokers, as a result of which more properties are being offered for conversion; developed closer working arrangements with local communities which have resulted in increased sharing of homes and more conversions of private properties; established some 170 *War Housing Centers* which are clearing houses of information about local housing accommodations and are the places where vacancies may be registered and applications for accommodations filed, thus facilitating the meeting of demand and supply in a given area.

Also, during 1943, NHA's policy of encouraging private building enterprise to do as much of the war housing job as it could and was willing to do under the limitations as to materials, prices, and rents dictated by the war economy has been further implemented. The NHA has cooperated closely with private industry and private finance, to obtain their maximum participation in the war housing program. This has included joint efforts to save critical material by revised construction practices and the development of substitutes; constant consultation on mutual problems and the development of as great a degree of certainty in operating conditions as can be attained in war-

time. The NHA has secured equal access to critical materials for qualified private projects through the AA-3 preference ratings now assigned by the WPB to all war housing. It has cooperated also in the revision of war housing construction standards to simplify the alignment of private activity with war housing requirements. By thus clarifying the role of private enterprise and the conditions controlling its participation in the war housing program, the resources and cooperation of the private building industry have been mobilized to supply almost all of the war housing for which a continuing postwar need is indicated.

Since the beginning of the housing emergency in mid-1940 private builders had completed, up to Nov. 1, 1943, approximately 600,000 new family dwelling units under the war housing program and had more than 80,000 additional units under construction. This includes close to 300,000 units built without priorities in the earlier period of the emergency but serving war housing needs, and more than 380,000 units started with priorities assistance under local war housing quotas.

The final major move toward a complete war basis for housing has been the progressive shift of publicly financed housing away from permanent and toward temporary construction. This policy has been dictated by the necessity for maximum conservation of critical materials; besides, it is more economical, permitting more units out of given funds. Another important consideration has been time. Reference already has been made to the sharp reductions achieved in the use of critical materials. With respect to cost, the shift to temporary construction for publicly financed war housing has resulted in savings approaching \$400,000,000 in the cost of family dwelling units alone. The working out of a conversion technique, whereby family dwelling units can be produced at half the cost of even a temporary new dwelling, will result in the saving of another \$75,000,000. As for the time factor, resort to temporary construction has been a major factor contributing to the record of more than 1,000 new units of daily production for the publicly financed program.

Of the total publicly financed war housing program to date, almost precisely two-thirds of the units provided as of July 31, 1943, had been of nonpermanent construction. These units included both temporary and demountable types as well as stop-gap or trailer accommodations. The actual percentages are as follows: 33.3 per cent permanent; 61.5 per cent temporary, including demountable; and 5.2 per cent trailer units.

JOHN B. BLANDFORD, JR.

NATIONAL INCOME. See BUSINESS REVIEW; FINANCIAL REVIEW; LIVING COSTS.

NATIONAL INSTITUTE OF HEALTH. See PUBLIC HEALTH SERVICE.

NATIONAL INVENTORS COUNCIL. Created in August, 1940, by the Secretary of Commerce, the Council is a central clearing house for inventions and suggestions deemed valuable to the war effort. Since its creation, more than 170,000 inventions have been carefully examined and evaluated, a surprisingly large number of which have proved meritorious and useful.

Dr. Charles F. Kettering, President of the General Motors Research Corporation, is Chairman and other members include eminent scientists, inventors, Government officials, and business men well versed in the application of new devices, all of

whom serve without compensation. The Council staff of approximately 50 employees, includes a corps of competent engineers and technical experts—each a specialist in his own field. For further detail, see 1942 YEAR BOOK.

CHARLES F. KETTERING.

NATIONAL LABOR RELATIONS BOARD (NLRB). Activities of the National Labor Relations Board during its eighth year of operations reflect the continued rise in resort to the Board's election machinery for the orderly determination of collective bargaining representatives. Of the 9,543 cases filed with the Board during the year, 6,140, or 64 per cent, involved such determinations of bargaining agents, while 3,403, or 36 per cent, concerned unfair labor practice charges; the election cases represented the greatest number filed in any one of the Board's eight years, the unfair labor practices the lowest number in the last five years. Although still not a majority, the number of cases that involved formal procedures increased significantly over the previous year. Cases closed before formal action constituted 78 per cent of all cases closed; cases closed after formal action accounted for 22 per cent, compared with 16 per cent for 1942. This change can be attributed, in part, to the changing character and complexity of these cases in a wartime economy. (For an explanation of the work of the Board in conjunction with the war effort, see 1943 YEAR BOOK.)

The work of the National Labor Relations Board is not to be confused with that of the National War Labor Board (q.v.) whose function is essentially that of mediation and arbitration. The latter agency deals with disputes over wages, hours, or other conditions covered by the terms of union contracts. A sample of the coordination between this Board and the WLB is evidenced by the fact that an NLRB certification of a collective bargaining agency often has been a first necessary step to the settlement by the War Labor Board of disputes involving wages, union security, and other substantive labor agreement provisions.

As noted last year, the increased membership of organized labor, division, and competition within the labor movement and the giving up of the right to strike, combined to increase the work of the Board. In addition, 1943 has seen difficult investigation problems in a large group of cases arising in the presence of fluctuating employment, widespread in war industry. In earlier years, the question of representation usually arose in plants that had been previously unorganized, so that there were no existing bargaining rights to be protected or contract rights asserted, and the issue could frequently be resolved by agreement of the parties. Today, many cases are more complex. For example, some cases involved such groups of workers as militarized guards, inspectors, and commission workers of questionable employee status. Investigation of these cases is relatively difficult and time consuming because new and novel questions are raised.

Of the 9,453 cases filed during the year, 4,287, or 45 per cent, were filed by affiliates of the Congress of Industrial Organizations and 3,729, or 39 per cent, by American Federation of Labor unions; 1,535, or 16 per cent, were filed by unaffiliated unions, employers, or individual workers.

On July 1, 1942, the Board had on its docket 1,086 representation cases—i.e., cases concerned with petitions filed by employees or employers requesting Board investigation and determination of units and freely-chosen representatives for the

purposes of collective bargaining. With the filing of 6,140 new election cases, the Board's preoccupation with a total of 7,226 such cases reached within a hundred of the all-time high. Over 1,400,000 workers were eligible to participate in the 4,153 elections and pay-roll checks conducted during the year, an average of 13 such elections daily; 2,755 of these were conducted upon agreement of the parties, 1,162 were directed by the Board, and 236 followed stipulations providing for Board certification upon consent elections.

Workers cast 1,126,501 valid votes in the 4,153 elections. The A.F.L. was designated as bargaining agent in 1,398 elections, the C.I.O. in 1,766, and unaffiliated unions in 416. No union was successful in obtaining a majority in 573 elections. Expressed in terms of valid votes cast for labor organizations, the A.F.L. received 267,118 votes, the C.I.O. received 515,271 votes, unaffiliated unions polled 140,780 votes, and 203,000 votes were cast against representation by unions. The C.I.O. won 75 per cent of the 2,350 elections in which it participated; the A.F.L. won 69 per cent of its 2,018 elections, and unaffiliated unions won 56 per cent of the 745 elections in which they appeared on the ballot. In 513 electoral contests between the A.F.L. and C.I.O., the C.I.O. won 52 per cent, the A.F.L. 41 per cent. Both the A.F.L. and the C.I.O. won a majority of the contests with unaffiliated unions.

The Board carried over from last year 1,744 unfair labor practice cases. With the 3,403 new cases filed, the total number to be handled was 5,177. Of these 3,848, or 74 per cent, were closed by the Board. As in previous years the predominant allegation of unfair labor practice charges received—in 2,256 cases—concerned employer discriminatory discharge or demotion. The complaint of refusing to bargain collectively arose in 756 cases, as compared to 1,550 in 1942. Charges alleging company domination of a union declined from 613 in 1942, to 337 in 1943.

The Board's speedy and peaceful resolution of disputes involving employer unfair labor practices is evidenced by the fact that 3,306 of these 3,848 unfair labor practice cases closed, or 86 per cent, were closed without resort to formal action; 1,298, or 33 per cent, were settled by agreement of all parties; 1,488, or 39 per cent, were withdrawn without formal action. Regional Directors of the Board refused to issue complaints in 520 cases, or 14 per cent.

In the remaining 14.2 per cent of the unfair labor practice cases closed, the Board resorted to formal procedures provided by the Act. Decisions and orders were issued by the Board numbered 405—265 in cases contested by the parties and 140 based upon stipulation and consent decrees, an increase of 40.6 per cent above 1942. Four hundred complaints charging unfair labor practices were issued, an increase of 11.4 over the previous year; 365 hearings were held on such charges, resulting in the issuance of 261 Intermediate Reports by Trial Examiners (an increase, respectively, over last year of 29 and 30 per cent).

In its work of remedying unfair labor practices during the year the Board ordered 8,361 workers reinstated. Of these, 2,717 were members of the A.F.L., and 5,079 were members of the C.I.O. Back pay awarded to 5,115 workers illegally discharged or otherwise discriminated against totaled \$2,284,593, and 1,100 notices of compliance with the Act were posted by employers.

The 9,543 new cases filed with the Board during the fiscal year 1943 involved plants covering at

least 8 million workers. As was the experience in preceding years, most of the cases, 7,560, or 79 per cent, of all those received involved manufacturing industries. However, during the last year, the impact of war production increased the frequency with which these industries figured in Board cases: 50 per cent were concentrated in seven major industries, all essential to the war effort. These were iron and steel, machinery, aircraft, food, shipbuilding, chemicals, and electrical machinery. Wholesale trade, which had ranked high in 1942, dropped from 744 cases to 295.

Covering the 8-year period from passage of the Act in July, 1935, through June 30, 1943, 58,318 cases have come before the Board, 32,306, alleging unfair labor practices and 26,012 involving questions of employee representation. During this time the Board issued 7,034 decisions, 2,213 in unfair labor practice cases and 4,821 in election cases. It has conducted 15,210 elections in which 4,389,860 votes were cast. The courts have passed upon 488, or 22 per cent, of the Board's decisions in 2,213 unfair labor practice cases. In the Supreme Court, of the 42 Board orders reviewed, 2 were denied enforcement. In the Circuit Court of Appeals, 446 Board orders were reviewed and 380, or 85 per cent, of them were enforced. For 1943 court decisions, see LAW.

The year 1943 saw added duties given to the Board. In March, Congress amended the Communications Act of 1934 and gave the Board the responsibility of protecting the rights and privileges of telegraph employees which might be affected by the merger of the Western Union and Postal Telegraph companies. Further, with the passage in June of the War Labor Disputes Act, the Board was given the responsibility of conducting strike ballots as provided in that Act and certifying the results of such balloting to the President. In the first six months of this law, 654 strike notices were filed, 444 were withdrawn, 117 strikes votes were held.

H. A. MILLIS.

NATIONAL MEDIATION BOARD. A nonpartisan independent Board of the U.S. Government whose duty is to mediate differences between the railroads, the express and Pullman companies, and the airlines on the one hand and their employees on the other. Chairman in 1943: Wm. M. Leiserson.

See RAILWAYS.

NATIONAL PARKS AND MONUMENTS. For the National Park Service the year 1943 was one of continued cooperation in the war program, further curtailment of personnel, and last, but most important, continued protection of that segment of the Federal estate known as the National Park System so that present and future generations, through the preservation of these sites of significance in natural and human history, will be able to see the untamed America that was, and understand the compelling influences that built and strengthened this nation.

At the close of 1943 the National Park System consisted of 168 units (national parks, national monuments, and allied areas) having a combined area of approximately 22,000,000 acres. Two of these units—Jackson Hole National Monument, Wyoming, and the Thomas Jefferson National Memorial located on the shores of the Tidal Basin in the Nation's Capital—were added to the System in 1943. Establishment of the 221,610-acre Jackson Hole National Monument marked the completion of a program initiated nearly two decades

ago to preserve for posterity this outstanding scenic, historic, and wildlife region adjoining Grand Teton National Park. Approximately 92 per cent of the monument land is Federally owned or has been purchased by John D. Rockefeller, Jr., for donation to the Federal Government. All valid existing rights on the approximately 8 per cent of privately owned land within the monument are protected by the Proclamation of President Roosevelt establishing the monument.

Under authority of the Historic Sites Act of Aug. 21, 1935, the Secretary of the Interior designated the Independence Hall group of structures in Philadelphia, Pa., and St. Paul's Church, Eastchester, N.Y., as national historic sites on May 14, 1943, and July 5, 1943, respectively. These sites are in non-Federal ownership, hence are not administered as units of the National Park System.

Due to the exigencies of war, travel to the various national parks, monuments, and allied areas continued to decline, visitors during the travel year ended Sept. 30, 1943, totaling approximately 8,000,000 as compared with an estimated 10,700,000 during the 1942 season and an all-time high of approximately 21,000,000 during the prewar 1941 season. Members of the armed forces visiting parks and monuments in 1943 totaled nearly 2,000,000.

Intensified cutting of trees on private and national forest lands to meet war requirements made that much greater the Service's responsibility to preserve the magnificent virgin forests entrusted to its care. Only 1 per cent of the 630,000,000 acres of forested land in the nation is under Service jurisdiction, a small fraction to hold inviolate for the benefit of present as well as future generations of Americans.

Because of a critical need for certain types of wood for airplane construction, the magnificent Sitka spruce forests of Olympic National Park, Washington, appeared for a time to be in jeopardy. Fortunately, however, subsequent cancellation of plans for some types of wooden planes, increased spruce aircraft lumber production in British Columbia and Alaska, and greater availability of aluminum for airplane manufacture made it unnecessary to invade the Olympic forests. The War Production Board advised that, barring unforeseen developments, Sitka spruce requirements through the first quarter of 1944 can be met from supplies available outside the Olympic region.

Approximately 300 authorizations for wartime use of parks and monuments were granted by the Service in 1943. Partial use of these areas by the military for recreation, camping, and troop training purposes continued throughout the year. In June the famous Ahwahnee Hotel in Yosemite National Park, California, was converted by the Navy into a convalescent center.

Despite the extensive wartime use of Service areas since the outbreak of hostilities there has been little sacrifice of park values. Greater sacrifice may be imperative as the war progresses, but the Service feels that it will emerge from this conflict with the basic idea intact that national parks and monuments must be protected.

NEWTON B. DRURY.

NATIONAL PATENT PLANNING COMMISSION. See **PATENT OFFICE.**

NATIONAL QUARANTINE SERVICE. See **PUBLIC HEALTH SERVICE.**

NATIONAL RESOURCES PLANNING BOARD (NRPB). A division of the Executive Office of the President

which functioned as the planning arm of the Executive Office from its establishment, July 1, 1939, until July 1, 1943, when it went out of existence by reason of the fact that the Congress failed to renew its appropriations. For its set-up, see 1943 YEAR BOOK, p. 440. For reports made public during 1943, see **POSTWAR PLANNING**; **SILVER**; **UNITED STATES.**

NATIONAL SECURITY AWARD. See **CIVILIAN DEFENSE, OFFICE OF.**

NATIONAL SERVICE, Compulsory. See **AUSTRALIA, CANADA, GERMANY, GREAT BRITAIN,** and other belligerent countries, under *History*.

For a proposed **National Service Act** in the United States, see **UNITED STATES** under *Manpower*.

NATIONAL WAR FUND. Born of war, and linked to the peace by effective association with local home agencies for health, welfare, and recreation, the National War Fund is a philanthropic federation of 17 war-related agencies with three simple aims: first, to determine the nature and the extent of the war-related needs; second, to see that everybody has a chance to contribute to the funds required; and third, to channel the sums raised for its member agencies wherever American help is currently most needed—enough and on time. This undertaking springs from the desire of the country at large for an orderly, systematic, economical, and efficient way of carrying forward the agencies of war philanthropy. It was created with the approval of the President's War Relief Control Board, but as a wholly voluntary agency operating under the control of officers and directors representing the whole country.

Organized in January, 1943, the National War Fund launched a nation-wide campaign during October to raise \$125,000,000 to meet the needs of its 17 member agencies. The campaign organization was created in 10,000 cities, towns, and counties, and wherever there were established organizations such as community or war chests National War Fund cooperated with these organizations. The 17 member agencies and the budgeted needs until Oct. 1, 1944, out of a total national goal of \$125,000,000, are as follows:

Service to the Forces: United Service Organizations (q.v.), \$61,227,000; United Seamen's Service—Rest Homes and convalescent centers, for merchant sailors, \$4,125,000; War Prisoners Aid—Educational, spiritual and recreational service in prison camps, \$2,320,000; and through other agencies, packages of food and medical supplies for Greek, Yugoslav, French, Polish, Czechoslovak, and Belgian prisoners of war, .

Aid for Unoccupied Areas: Russian War Relief—Chiefly medical supplies and clothing, \$10,155,000; United China Relief, \$9,873,000; British War Relief Society—Support for hospitals, nurseries, children's homes, ambulance units, etc., \$5,698,000.

Relief for Occupied Countries: Food and medical supplies, so far as distribution permits, for Greek War Relief Association, \$5,122,000; Polish War Relief, \$3,750,000; United Yugoslav Relief Fund, \$2,238,000; French Relief Fund, \$2,183,000; Belgian War Relief Society, \$325,000; United Czechoslovak Relief, \$234,000; Queen Wilhelmina Fund, \$200,000; Norwegian Relief, \$200,000; Friends of Luxembourg, \$121,000.

Refugee Relief. Refugee Relief Trustees—Aid for special groups of refugees requiring private relief, \$2,809,000; U.S. Committee for the Care of European Children, \$812,000.

National War Fund Expenses—For Campaign and Administration, \$800,000.

Contingent Fund—To meet needs which are certain to arise because of military operations, particularly as a result of its reoccupation of Allied countries that are now under Axis domination, \$12,-808,000.

Officers: President, Winthrop W. Aldrich; Secretary, Ralph Hayes; Treasurer, Gordon S. Rentschler; Vice-presidents, Jean B. Adoue, Jr., Prescott S. Bush, Robert M. Hanes, Francis P. Matthews, Walter Rothschild, Edward L. Ryerson, Robert G. Sproul, and Henry M. Wriston; Chairman of Budget Committee, Gerard Swope. Headquarters: 46 Cedar Street, New York 5, N.Y.

See UNITED SERVICE ORGANIZATIONS.

NATIONAL WAR LABOR BOARD (WLB). The National War Labor Board was established by Executive Order 9017 of Jan. 12, 1942, as final arbiter of wartime labor disputes under the no-strike, no-lockout pledge, made by labor and management representatives at the White House ten days after Pearl Harbor. Under the Anti-Inflation Act of Congress, passed on Oct. 2, 1942, the President issued Executive Order 9250 of October 3, giving the Board the added responsibility of stabilizing all wages, and most salaries under \$5,000 a year, at Sept. 15, 1942, levels. Additional statutory authority was given to the Board by Congress in the War Labor Disputes (Smith-Connally) Act of June 25, 1943. This Act authorized the WLB to settle all labor disputes affecting the war effort and to "provide by order the . . . terms and conditions . . . governing the relations between the parties which shall be in effect until further order of the Board."

Tripartite in nature, the 12-man Board is composed of four representatives each of labor, industry, and the public. The members are named by the President, who also designates the chairman from among the public members. The President by Executive Order 9395A of Nov. 20, 1943, authorized appointment of alternate public members; from the beginning there had been alternate industry and labor members. The WLB's twelve Regional Boards and five industry commissions, also tripartite in composition, have power to make final decisions in local labor disputes and in voluntary wage and salary adjustment cases, subject to appeal to the National Board. Cases of national importance are handled in Washington. Field offices of the Wage and Hour Division (q.v.) of the Department of Labor receive voluntary wage adjustment applications for the Board. Labor disputes, the other major type of cases handled, are certified to the WLB by the Conciliation Service (q.v.) of the Department of Labor, or may be taken by the Board on its own motion.

Between January and November, 1943, the Board and its agencies issued final rulings in more than 109,246 voluntary applications for wage and salary adjustments involving about 6,000,000 employees. By the end of 1943, voluntary wage and salary cases were being decided at the rate of about 3,000 a week. Wage increases approved by the WLB from Oct. 3, 1942, to Oct. 1, 1943, raised the average factory hourly wage rate only six-tenths of one cent. Only four in every thousand wage increases approved required a raise in price ceiling. From January through November, 1943, the Board decided over 3,700 labor dispute cases, involving over 3,500,000 workers. During 1942, it handled 500 dispute cases involving 2,500,000 workers.

In 1943, the Board's wage stabilization policy developed within the framework laid down by the Act of Oct. 2, 1942; Executive Order 9250 of Oct. 3, 1942; Executive Order 9328 of Apr. 8, 1943 (the "Hold-the-Line" Order); and a policy directive issued by the Director of Economic Stabilization (q.v.) on May 12, 1943.

Under this policy the Board may approve increases on the following grounds: (1) General increases related to the cost of living will be limited to a total of 15 per cent above the average straight-time hourly rates paid in January, 1941—the amount due under the Little Steel Formula. (2) Gross inequities between plants may be corrected up to the minimum of the "sound and tested going rates" being paid for the job in the same labor market area. Regional Boards determine these sound and tested rates. (3) In rare and unusual cases where necessary for effective prosecution of the war, rates may be raised above the "minimum sound and tested going rates." The Board granted such increases in only a half-dozen cases during the first year of the stabilization program. (4) Wage inequities between jobs within a plant may also be corrected. (5) Substandard-of-living wages may be corrected up to a rate not above 50¢ an hour as set for each area by the Regional War Labor Board. (6) Requests for approval of new incentive plans are judged according to this policy: Such plans must have the joint approval of the company and the union if a union is the recognized or certified bargaining agent for the employees involved. The Board will not judge an incentive plan on its technical production merits, but only on whether it is within the stabilization program. The plan must not increase unit labor costs. The Board will require periodic review of each plan after it has been put into operation in order to appraise its conformance to the stabilization program.

In addition to the above increases which may be made with Board approval, WLB has ruled that several kinds of increases may, under certain conditions and rules, be made without Board approval. Among these are (a) increases to equalize rates paid to women for work of the same quality and quantity as work done by men in the same plant; (b) increases to bring rates up to 40¢ an hour; (c) individual increases for merit, length of service, promotion, or reclassification; (d) payment of customary bonuses or commissions.

The Board held firmly to its wage policy in ruling on the wages of the United Mine Workers who struck four times during 1943, and had their mines seized twice by the government. The miners originally requested a \$2 a day increase with no increase in production time. In the end they agreed to one hour's more productive work each day, for which they were paid \$1.50, the amount they were entitled to under the overtime provision of their old contract. An additional \$2.60 a week may be earned by miners who work a full six day week under a portal to portal system, approved by the Board. This amount becomes due under the overtime provisions of the Fair Labor Standards Act when travel time is included in computing the 40-hour work week, as required under a court ruling. The WLB approved the wage agreement signed by Secretary Ickes, on behalf of the government, and the UMW, for the period of government operation. A proposed agreement between the union and the operators for private operation was pending before the Board on Dec. 31, 1943.

Time lost through strikes in the first six months of 1943 was $1\frac{1}{100}$ of 1 per cent of the time worked. Three-fourths of the loss was due to coal miners'

strikes. Strike idleness in 1942 was $\frac{5}{100}$ of 1 per cent of time worked, and in 1941 was $\frac{3}{100}$ of 1 per cent.

Developing policies of the WLB on the disputes front during 1943 included adoption of the position that a company cannot take advantage of labor's no-strike pledge to abandon in wartime a closed or union shop already established by a prior contract reached through collective bargaining. This policy was first stated in the Harvill Aircraft case, February, 1943, with industry members dissenting.

Voluntary maintenance-of-membership provisions, which the Board frequently awards as a compromise of the closed-shop—open-shop issue, were standardized in form. Since Dec. 1, 1943, the provision reads in part as follows:

All employees who, on (insert date—fifteen days after date of directive order), are members of the Union in good standing in accordance with its constitution and by-laws, shall, as a condition of employment, maintain their membership in the Union in good standing for the duration of the collective agreement in which this provision is incorporated, or until further order of the Board. . . .

The Union, its officers and members, shall not intimidate or coerce employees into joining the Union or continuing their membership therein. . . .

The provision provides, further, for arbitration of disputed union membership under the maintenance clause.

In November, 1942, the Board had emphasized its intention of giving workers genuine freedom of choice under maintenance-of-membership provisions when it passed a resolution designed to protect the workers from union or employer interference with their freedom to withdraw or not withdraw from the union during a 15-day period without losing their jobs. In November, 1943, the Board approved a statement explaining the rights of workers under a maintenance clause, for posting in plants or publishing by the company or union. It explains that union members have the choice of remaining in the union or withdrawing during the 15-day "escape" period and that no employees are required to join the union to retain their jobs. Those who choose to remain members after the 15-day period thus agree to maintain their membership as a condition of employment.

The Board has acted frequently on the policy that the protection of membership maintenance should not be granted to unions which have shown themselves irresponsible. In the Chrysler Case, August, 1943, the Board denied maintenance of membership and a checkoff clause to the United Automobile Workers, C.I.O., because of repeated strikes, with the proviso that the union could renew its request after six months on showing of increased responsibility. The WLB also ordered appointment of an arbitrator to settle grievances arising under the contract.

The Board acts promptly on actual and threatened strikes within its jurisdiction, telephoning, or telegraphing the parties, and often sending a mediator to compose differences.

The compliance powers of the War Labor Disputes Act were augmented by Executive Order 9370 of Aug. 16, 1943. This Order authorizes the Economic Stabilization Director to direct other Government agencies to apply appropriate sanctions against employers, unions, or individuals who refuse to comply with WLB orders.

The Board has ruled that wage differentials based solely on difference in sex or race are without validity, and ordered their abolition where the quantity and quality of work is equal. (Southport Petroleum case, June, 1943.)

The sanctity of contracts arrived at through collective bargaining is respected by the Board, which urges management and labor to settle the details of their agreements through the normal channels of collective bargaining before bringing their case to the Board. The Board also encourages prompt settlement of grievances within plants, and has many times directed parties to a dispute to choose an arbitrator, impartial chairman, or umpire to make final rulings on grievances. On July 1, 1943, the Board unanimously urged parties to all labor agreements "to install adequate procedures for the prompt, just, and final settlement of the day to day grievances involving the interpretation and application of the contract" and "to make the full functioning of the grievance procedure a major responsibility under the no-strike, no-lockout agreement for maximum production to win the war." See LABOR CONDITIONS; LAW under *War Decisions* NLRB; NEWSPAPERS.

WILLIAM H. DAVIS.

NATS. Naval Air Transport Service. See AERO-NAUTICS.

NATURALIZATION. See IMMIGRATION, EMIGRATION, AND NATURALIZATION.

NAURU. An atoll in the Pacific (166° E. longitude and 26 miles south of the equator), which, until its occupation by the Japanese in 1942, was administered under a mandate conferred on the British Empire and confirmed by the Council of the League of Nations on Dec. 17, 1920. Area, 8.22 square miles. Population (Jan. 1, 1941), 3,352, including 1,761 Nauruans, 1,350 Chinese, 192 Europeans, and 49 other Pacific islanders. The chief product is phosphate (808,400 tons exported during 1940); a small amount of copra is exported. Trade (1940): imports £192,749 (foodstuffs and machinery were the chief items); exports £541,168. Shipping (1940): 123 vessels aggregating 592,794 gross tons entered and cleared. Finance (1940): revenue £27,104; expenditure £26,223. During 1943 the island was repeatedly bombed by U.S. Army planes.

NAVAL PROGRESS. In wartime the actual naval operations have obviously an all-important bearing on naval developments. The fighting on sea and shore serves as a great laboratory in which new weapons, methods, and tactics are tried out, improved, or discarded with a speed undreamed of in time of peace. Furthermore, the war operations constantly create changed conditions, with new requirements and shifted emphasis in construction programs.

Surrender of Fleets. Such a change has been brought about by the Mediterranean operations of 1942-43, as a result of which the two important fleets of France and Italy have passed from potential or actual enemy status and joined with the United Nations, while at the same time the Middle Sea has been set free for operations in Southern Europe and as a shorter communications line to the East. The surrender of the two fleets, the composition of which is given more fully later in the data on national navies, placed at the disposal of the western sea powers upwards of 100 Italian and nearly 50 French combatant ships, including 8 battleships, a carrier, and 15 to 20 serviceable cruisers. Whether or not all these are put to use, this freeing of the Mediterranean eases the pressure for construction of new major units, especially for the British who have borne the brunt of the Mediterranean war, and promises the release

of increased forces for the Pacific theater. Even without the French and Italian ships, and allowing a safe reserve of 6 or 8 first line units in British home waters, an Anglo-American force of about 30 battleships may now be put into the Pacific conflict—a superiority over Japan of roughly three to one, together with about 14 American and 6 British airplane carriers against 6 to 8 for the Rising Sun. Such a margin of superiority in both sea and air will be needed to clear and maintain the long Pacific lines of communication, break those of Japan, and hasten decisive results with economy of manpower. These new possibilities are undoubtedly a chief factor in plans for speeding the Eastern war.

The Part of Sea Power. The Mediterranean operations serve to illustrate the continuing and indeed greatly increased significance of sea communications in this intercontinental war. In the African fighting, on the European fronts established or to be established, in Asia, and everywhere in the Pacific, the fighting forces, their guns, tanks, munitions, fuel, and supplies—two tons or more for every fighting man—must be moved and kept moving by surface transport overseas. Aircraft, some 2,500 or more, have been borne by American surface carriers to the battle areas. Even in the land war on the Russian front a factor essential to success has been the great quantities of aircraft, munitions, and rolling stock carried by sea to Murmansk and the Persian Gulf. Not in this war, or in the envisaged future, can this heavy traffic be carried economically by other means. Nor is it easy to see how, over the vast ocean spaces, airpower unsupported by surface fleets can strike a decisive blow. The scope of planning and the quantities of shipping and protective cover called for in these overseas operations may be illustrated by the 3,266 ships and boats of all types employed in the Sicilian landings alone.

Amphibious Warfare. Both the Pacific and the Mediterranean campaigns have stressed amphibian operations, and the closest possible cooperation of sea, land, and air forces. Thus at Salerno British and American battleships were given cover by carrier-based aircraft, the carriers were covered by land-based aircraft, while both aircraft and naval vessels ranging from battleships to destroyers and PC boats bombed and shelled the beaches and afforded protection to troops before and after they were put ashore. To make possible these landing operations, the construction of landing craft in American shipyards was given high priority throughout 1942 and the first half of 1943. By July of this year, about 13,000 landing boats aggregating 610,781 tons had been completed in American yards, and in December a supplementary appropriation of \$5,300,000,000 provided for 1,000,000 additional tons of landing craft, as well as 2,500,000 tons of invasion craft and auxiliary vessels of varied types. The largest of the landing craft are the LSTs (landing ships, tanks) and LCIs (landing craft, infantry). The former are 327 feet in length, of over 5,000 tons displacement, and capable of carrying not only tanks but all types of smaller landing craft. The LCIs are also seagoing vessels 100 to 150 feet in length. Then there are all manner of smaller motorized craft, built of steel, wood, and rubber, including the LCPs or Higgins boats, about 30 feet long and carrying up to 50 men, and the LVTs (landing vehicles, tanks), armored and unarmored, among which are the amphibian "alligators" and 2½ ton "ducks" that have played a notable part in Pacific island attacks. Typical of these boats are

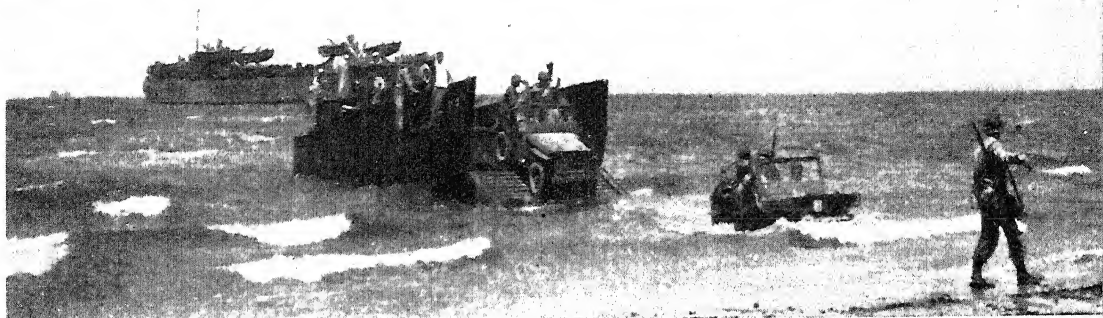
their shallow draft, protected steel sides, and big doors and ramps at the bow for quick unloading. For landing operations large amphibious forces have been organized and trained on both the Atlantic and Pacific coasts.

Naval Losses. The vulnerability of surface transports to air attack was illustrated most forcibly in the Bismarck Sea actions of last March, in which, striking at a Japanese convoy of 12 transports and 10 escorts, General MacArthur's planes sank 18 ships, inflicted a loss of 15,000 men, and destroyed 74 enemy planes, while losing only 4 of their own. With increasing weakness in the air, the Japanese have suffered severely in similar efforts to throw reinforcements into their beleaguered island bases. Speaking in October, Adm. E. J. King put their plane losses in combat with American forces in a ratio of four to one. Reports of surface engagements indicated ship losses in something like an equal ratio. From June 30, the date of the first American moves against New Georgia, to August 8, the Japanese lost certainly 23 (probably 26) cruisers and destroyers, and these losses again rose in November as an outcome of the American invasion of Bougainville and the severe bombings of Rabaul. In the Aleutian naval actions involved in the recapture of Kiska and Attu, in the advance northward through the Solomons during the summer and autumn, and in the more recent operations in the Gilberts and Marshalls, American naval forces appear as a rule to have inflicted far more serious damage than they received. Their first notable loss of the year was the heavy cruiser *Chicago*, crippled late in January by torpedo-planes in a night attack south of Guadalcanal (the first night attack made by Japanese planes in the war), and sunk by the same weapons next day. Other American losses include the 9,700 ton cruiser *Helena*, sunk July 6 in the Kula Gulf action after sharing in the destruction of two enemy cruisers and ten destroyers; the destroyers *Strong* and *Aaron Ward*, lost in the same waters; the *Gwin*, 1,630 tons, which went down after a hard-hitting action on July 13; the destroyers *Maddox*, *Rowan*, *Buck*, *Bristol*, and *Beatty*, sunk in Italian waters; the *Borie*, a destroyer escort, knocked out in a melee with submarines in the Atlantic; the destroyer *Chevalier*, put out of action October 6 at Vella Lavella Island; and the auxiliary carrier *Liscombe Bay*, torpedoed November 24 by a submarine in the capture of the Gilberts. Throughout the year American submarines have continued their destruction of Japanese shipping. At the end of December the record stood at 386 ships sunk, 36 probably sunk, and 114 damaged—a total of 536. At this date the total of Japanese ships sunk by submarines and other forces was put at 937. Secretary of the Navy Knox estimated in September that the Japanese had about 6,369,000 tons of shipping at the outbreak of war, had acquired a million tons since, and had lost 2,500,000 tons, or about one-third of the total. Of 16 U.S. submarines sunk other than by accident since Pearl Harbor, the ones lost this year are, in sequence, the *Argonaut*, *Amberjack*, *Grampus*, *Triton*, *Pickrel*, *Grenadier*, *Dorado*, *Runner*, *Wahoo*, and *Grayling*.

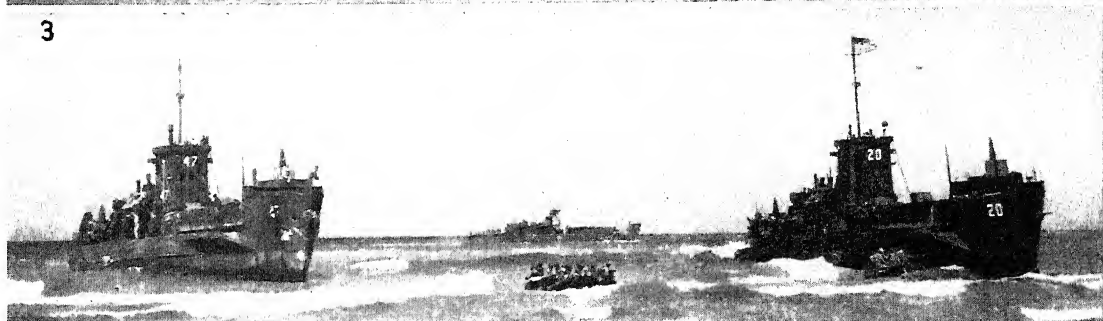
Anti-Aircraft Defense. While some of the naval losses listed in the preceding paragraph were inflicted by torpedo-planes, the year's record for surface ships (if we except the Japanese) shows in general more attention to air cover and more alert and effective gunnery defense. In the bombing of Rabaul, November 5-6, an American carrier beat off 72 enemy torpedo-planes and bombers, and



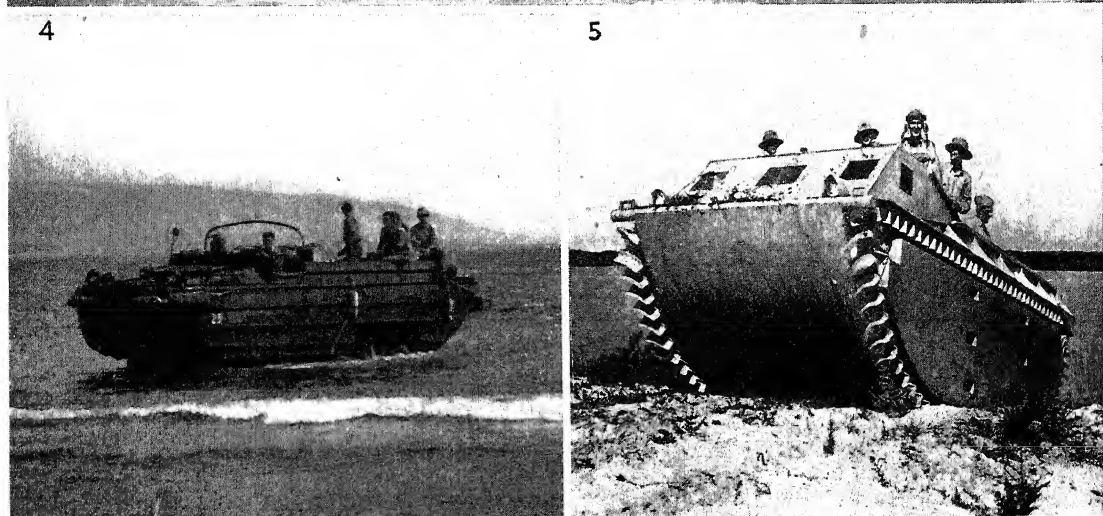
2



3



4

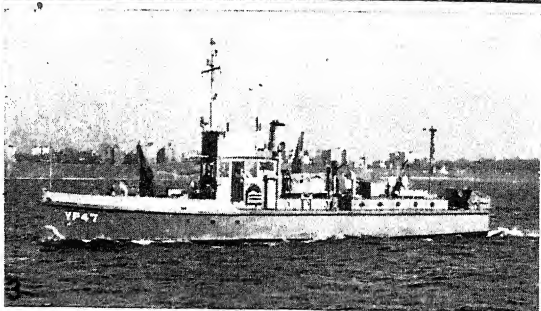
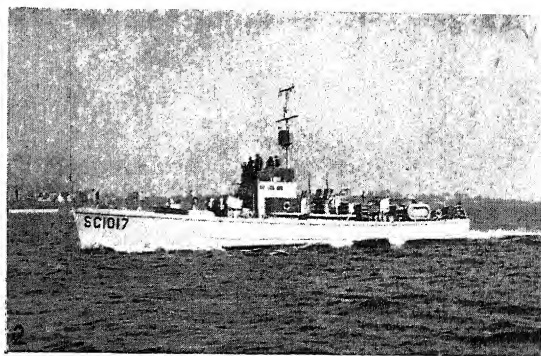
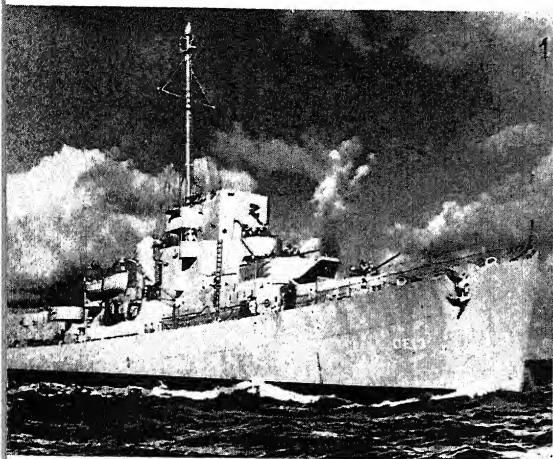


5

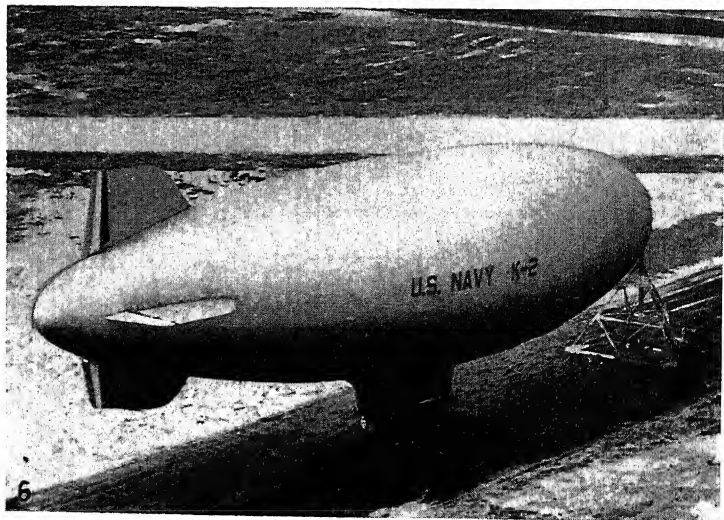
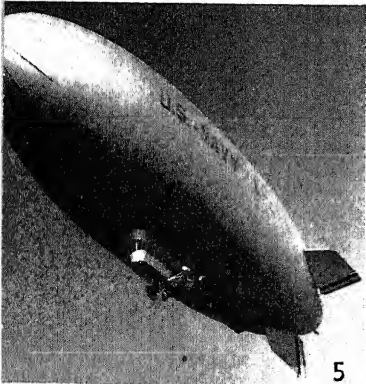
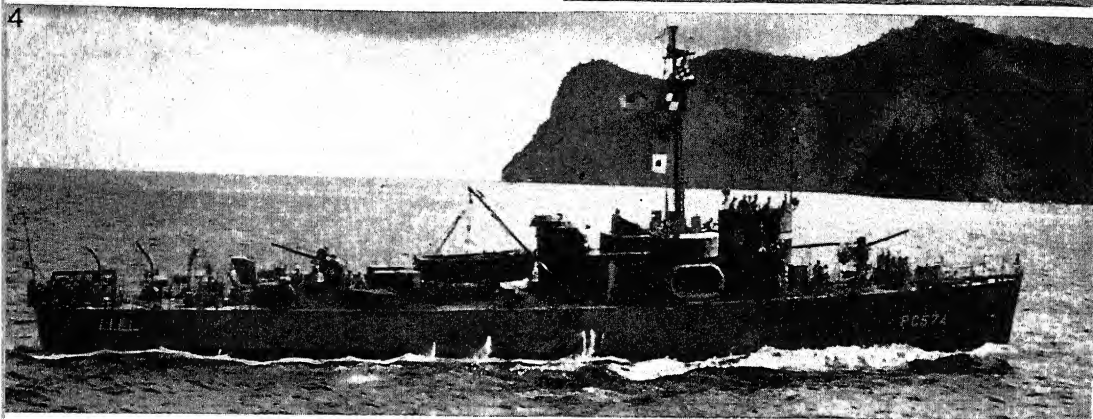
U.S. Navy Official Photos

TYPES OF INVASION CRAFT—USED IN AMPHIBIOUS OPERATIONS ON VARIOUS FRONTS

1. The LST, largest of the landing craft, disgorges its load of American soldiers. 2. Jeeps disembark from a 36-footer. 3. Amphibious crews row back and forth to the sea-going LCI. 4. The amphibious truck, more commonly called "duck." 5. The armored "alligator," equally at home on sea or land.



1. The Destroyer Escort, which combines sturdiness with endurance and heavy armament, used as a convoy guard.
2. An SC sub-chaser, a small edition of the PC boat.
3. A district patrol vessel which combs the coastal waters.
4. A 173-foot PC boat on duty with an Atlantic Convoy.



Official U.S. Navy Photographs

5. Non-rigid Airship L-2.
6. Non-rigid Airship K-2.

TYPES OF PATROL AND ESCORT CRAFT—USED IN THE ANTI-SUBMARINE CAMPAIGN

in the *Gilberts* another carrier, with her air cover, shot down 46. On the other hand, the sinking of the Italian *Roma* on September 11, probably by glider bomb from German aircraft, shows little, perhaps, other than the defects of Italian ship design. Recent British and American construction has achieved a high degree of protection by means of better compartmentation, heavier and better distributed deck and side armor, and vastly increased anti-aircraft armament. In British battleships of the *King George V* class the weight of armor is over 14,000 pounds, with 16-inch thickness at the water-line. American official reports in July stated that the anti-aircraft power of our battleships today is 100 times as great as three years ago, and that no less than 97 per cent in value of our recent gun production has been in weapons of 20 mm. and 40 mm. anti-aircraft and 3-inch 50 caliber and 5-inch 38 caliber double purpose guns, all types employed for anti-aircraft fire. At the same time, air power has been given adequate recognition by the official description of it as "the spearhead of the offense," and by a construction program which gave the navy over 18,000 planes at midyear and 65 new carriers, 11 of them of the fleet type, by the year's end.

Submarine Warfare. At the beginning of 1943 the German U-boat effort to strangle Atlantic supply lines remained the chief naval menace of the war. An upsurge of U-boat activity in March, with German claims of 851,000 tons of shipping sunk, raised fears that the spring months might repeat the critical losses of the two previous years. But later months brought reassurance. In April, though traffic was heavy and contacts with U-boat were more frequent than ever, the German claims—and in fact the actual losses—were cut in half. May was the best month since American entry into the war, and the sinkings showed a marked downward trend through the rest of the year. For the first six months of 1943 the ratio of ships sunk to U-boats destroyed was only half that of the six months preceding, and only one-fourth that of the first six months of 1942. Ship construction up to July showed a net gain over all losses of 3,000,000 tons. In May-July the U-boats destroyed numbered 90, of which the Americans accounted for 29—24 sunk by the navy and 5 by army air squadrons. In August-October the record was 60. During these last months the tonnage losses were reduced by half as compared with the preceding three months, and in November the figures continued to improve. Increased assurance that the submarine menace was under control appeared in the American decision in October that, to hasten the landing boat program, construction should be suspended on 305 destroyer escorts, 60 patrol craft escorts (180-footers), 50 steel patrol craft (173-footers), and 12 wooden sub-chasers (110-footers).

The decline in shipping losses in late summer was attributed in part to a withdrawal of U-boats for improved radar and other equipment and rearmament, especially against aircraft. Both before and after this period the submarines showed an increased tendency to stay on the surface and shoot it out with their air assailants, but without much advantage in the result. In a typical convoy attack in early December, the Admiralty reported 5 U-boats sunk and 3 crippled out of 20 in a two-day series of attacks, in which United States planes from Iceland, British and Canadian planes from England, escort carrier planes, destroyers, and frigates combined to make the kills. Only 3 planes were lost and 99 per cent of the convoy came

through safely. As illustrated by this action, the U-boats continued their wolf pack or mass tactics, in which frequently one boat engaged an escort ship and thus sought to draw off the convoy protection, while the rest, with decks awash and hatches open for better observation, awaited the signal to subject the convoy to concentrated attack. Current estimates still placed the total number of U-boats at about 400, but with declining production and mounting losses, which have caused a severe drain on trained and capable personnel. For cheaper and faster construction, but at a cost in vulnerability, the newer boats were built without the former protection of double hulls. They ranged from 750 to about 1,500 tons, with a number of supply submarines or "milch cows," used to provide combat craft with fuel and perhaps also a fresh stock of torpedoes at sea.

The decreased effectiveness of the U-boats may be attributed to a number of causes—the increased numbers and range of land-based aircraft brought against them; the increased protection of convoys by destroyer escorts, corvettes, frigates, and escort craft of all types; the increased use of escort carriers; the destructive bombing of operational bases in France and production bases in Germany; and finally, the introduction of heavier depth bombs, powerful new searchlights, improved detection methods, and other weapons still kept secret. Both aircraft of the British Coastal Command and Liberator bombers of U.S. Army Anti-Submarine Squadrons, operating from British bases, were used for long range patrols in the Atlantic and Bay of Biscay and along the Spanish coast, where in a single nine day period in July they were reported to have made 12 attacks and sunk or damaged 8 boats. In November this work of the army fliers was taken over wholly by the navy. On the American coast the blimps, increased to twelve 4-ship squadrons and with many others under construction, continued to prove their value for inshore patrol. The blimps are of two types, the small Ls used chiefly for instruction, and the larger K type with crews of eight to ten men. It is stated that no ships have been lost under lighter than air escort, but in July the first blimp was shot down by a submarine. Both the British and Americans have put into service numerous aircraft carriers converted from merchant vessels, of which the United States expected to complete over forty by the end of the year. The aircraft from carriers are especially valuable for the 400 or 500 miles of mid-Atlantic not covered by land-based planes. In general they serve the purpose of keeping the submarines beneath the surface in daylight, and at sufficient distance from the convoy to prevent their attaining position for night attack. The effect of the bombing raids on French submarine bases is indicated by the estimate that L'Orient base was reduced to 20 per cent effectiveness by destruction of docks, repair facilities, and similar installations, though apparently the concrete submarine pens have escaped serious damage. Bombings of Germany have blasted Hamburg to ruins along with its eight big shipyards, and have caused similar damage to other coastal bases and inland production centers.

Among the surface escort types, the most noteworthy is the DE or destroyer escort, of which 800 were called for in the original American program and about 260 were completed during the year. Built on simplified destroyer lines, about 300 feet in length by 36 feet beam, the great advantage of the DE is that it can be constructed by mass production for about \$3,500,000, or half the cost

COMPARATIVE DATA—THE GREAT NAVAL POWERS—AS OF DEC. 31, 1943

Country and type of ships	Commissioned and under way		Total built		Building		Losses entire war		Losses 1943	
	No.	1,000 tons	No.	1,000 tons	No.	1,000 tons	No.	1,000 tons	No.	1,000 tons
United States:										
Capital ships.....	8	300	22	731	10	342 ¹	1	29	...	...
Aircraft carriers.....	14 ²	297 ²	14 ²	297 ²	?? ³	??	4	87	1	10
Cruisers (8").....	20	218	20	218	?? ⁴	??	6	54	1	10
Cruisers (6").....	30+	276+	40+	346+	?? ⁴	??	3	18	1	10
Destroyers.....	540+	1,016+	608+	1,145+	?? ⁵	??	40	59	12	18
Submarines.....	115+	172+	181+	224+	?? ⁶	??	16	22	11	16
Total.....	727+	2,279+	885+	2,961+	??	??	71	279	26	64

¹ Includes 6 Alaska Class, 27,000-ton super-cruisers. 45,000-ton Wisconsin has been launched. Does not include 58,000-ton Montanas whose construction has been suspended. ² Includes 8 of the 25,000-ton Essex Class, 3 converted cruisers, plus the Saratoga, Enterprise, and Ranger. Does not include an undisclosed number of converted merchant ships, probably over 40. ³ Building of three 45,000-ton aircraft carriers was announced; many merchant ships are being converted into carriers; a number of carriers of a new type, having a very small turning circle, are being built. ⁴ Under the 1942 program 500,000 tons of cruisers, heavy and light, are to be built. 32 light cruisers of the Cleveland Class were ordered in 1940—and many additional units since. This is the largest group of cruisers of a single design ever authorized. ⁵ Under 1942 program 900,000 tons of destroyers and escort vessels are to be built. Previously 80 new destroyers had been authorized. This figure includes over 200 destroyer escorts (DE's) built or building. ⁶ 120 more submarines of 1,525-ton Gato Class have been ordered. No information concerning the latest submarines has been released, but it is probable that they will be of the same general type as the Gato Class to facilitate building.

British Empire:										
Capital ships.....	6	208	15 ¹	480	4	160	5	171	...	...
Aircraft carriers.....	4 ²	92	6 ²	129	2+	46+	7 ³	110	...	...
Cruisers (8").....	8	80	10	100	??	??	5	46	...	...
Cruisers (6").....	30	216	45	289	??	??	21	142	2	14
Destroyers.....	169 ⁴	237 ⁴	278 ⁴	389 ⁴	??	??	107 ⁴	134	19 ⁴	24
Submarines.....	61	54	72	60	??	??	59 ⁵	59	18 ⁵	18
Total.....	278	887	426	1,447	??	??	204	662	39	56

¹ Includes 32,000-ton battle cruiser Renown. ² Includes 23,000-ton Indomitable, all regular fleet carriers; no converted types. ³ Does not include at least 122 corvettes, 23 frigates, 40 sloops, all escort craft used in convoy duty. ⁴ Includes destroyers, destroyer escorts, and frigates. ⁵ Does not include 3 midget submarines lost in attack on Tirpitz, Sept. 22, 1943. ⁶ Includes 2 escort aircraft carriers Audacity and Avenger.

Russia:										
Capital ships.....	...	...	3	69	2 ¹	70	2	58	...	...
Aircraft carriers.....	1 ²	12	1 ²	12	..	...	...	...	...	...
Cruisers (8").....	...	...	...	...	1	10	...	14	...	...
Cruisers (6").....	6	53	8 ³	68	...	...	2 ⁴	14	...	...
Destroyers.....	69 ⁷	116+	107 ⁷	181	??	??	17 ⁵	25	...	...
Submarines.....	192+	200+	200+	204+	??	??	11 ⁶	??	??	??
Total.....	268+	381+	319+	514+	??	??	32	??	??	??

¹ One more 35,000-ton battleship was under construction at Nikolaiev but was destroyed prior to German occupation. Swedish reports claim 4 battleships now building. Germans claim to have bombed and wrecked 23,000-ton battleship, August, 1941. ² The Krasnoe Znamya, launched 1939, may have been completed. Existence of second carrier, the Voroshilov, regarded as doubtful. A carrier, the Stalin, reported in Black Sea, probably a seaplane carrier. ³ Germans claim that 7,000-ton light cruiser Chervonaya Ukraina was sunk off Sevastopol in February, 1942. ⁴ Germans claim capture of light cruiser Orjontikidze, also sinking light cruiser in Black Sea. ⁵ Germans and Finns claim loss of 11 Russian destroyers and torpedo boats. ⁶ Germans claim 36 subs. lost. ⁷ Includes smaller patrol types rated as torpedo boats.

of a destroyer, and in four months, or less than half the time. Both American and Canadian shipyards have also produced numerous large frigates (about the size of destroyer escorts), smaller corvettes, and the patrol craft and sub-chasers which have long proved useful against the submarine. About 2,000 American merchant ships have been armed in 1943, bringing the total to well over 4,000. As a result of the heavy losses early in the year, a conference at Washington in April, headed by Admiral King, effected a reorganization of anti-submarine defense in the Atlantic, with more definite areas for British, Canadian, and American aircraft coverage, and the appointment of a Canadian officer, Rear Adm. L. W. Murray, as commander in chief in the North-west Atlantic. During the summer U-boat operations largely avoided this northern area, and according to Prime Minister Churchill not an Allied ship was sunk there in the four months ending September 18. Better patrol of the Central Atlantic sea lanes was made possible by Portugal's agreement in November to permit airplane bases in the Azores.

Small Torpedo Craft. Squadrons of fast American motor torpedo boats (MTBs) have continued to harass Japanese supply lines in the Solomons area, and many boats of this type have been supplied to Cuba, Brazil, and other Latin American countries for anti-submarine patrol. Despite their notable achievements against capital ships in the first World War, the Italian motor torpedo boat

flotilla in this war accomplished relatively little, their attacks on the British at Alexandria, Malta, and elsewhere being described as more of a nuisance than a serious menace. In the Channel and its approaches British motor gunboats—72-footers with two to four torpedo tubes—engaged in numerous melees with E-boats, as the German 105-footers are called. In an action in October, aided by British destroyers, they sank four out of 30 E-boats and damaged 7 others. A few days earlier, on October 23, the British lost the light cruiser Charybdis, 5,420 tons, and the destroyer Limbourne in an engagement with German light forces on the French coast. British employment of another miniature type, the midget submarine, was brought to world attention when in September a large force of these craft attacked the battleship Tirpitz some 50 miles up Alten Fjord in the extreme north of Norway. Considerable damage to the Tirpitz was indicated by air photographs showing repair operations under way and a big oil slick extending two miles. Three of the submarines were lost. Long based at Trondheim, Norway, with the Scharnhorst and a force of cruisers and destroyers, the Tirpitz was at sea during the German raid on Spitzbergen early in September and then retreated into Alten Fjord. In the Norwegian bases this German fleet in being served a useful strategic purpose in containing much larger British forces, including an American task force, which were held in constant readiness to prevent a sortie. Repeated efforts failed to entice the Ger-

COMPARATIVE DATA—THE GREAT NAVAL POWERS—AS OF DEC. 31, 1943—Continued

Country and type of ships	Commissioned and underage		Total built		Building		Losses entire war		Losses 1943	
	No.	1,000 tons	No.	1,000 tons	No.	1,000 tons	No.	1,000 tons	No.	1,000 tons
Japan:										
Capital ships.....	2 ³	80 ³	10 ³	320	7 ⁴	180	2	58	...	...
Aircraft carriers.....	4 ⁵	54	4 ⁵	54	??	??	6 ¹	114	...	...
Cruisers (8").....	...	...	...	...	??	??	11 ²	110	??	??
Cruisers (6").....	30-35 ⁶	...	...	...	...	...	18 ²	??	??	??
Destroyers.....	...	...	75 ⁷ +	??	??	??	90 (est.)	??	33 (est.)	??
Submarines.....	...	...	80 ⁸ +	??	??	??	42 (est.)	??	14 (est.)	??
Total.....	...	...	169	...	...	...	169	...	...	...

¹ Includes reported loss of *Hosyo* which cannot be confirmed plus 4 seaplane carriers. ² Reports of Japanese cruiser losses have been conflicting and inaccurate. Many cruisers reported as sunk were probably large destroyers. ³ Includes 2 new 40,000-ton battleships, *Yamato* and *Musashi*, formerly believed to be the *Nissin* and *Takamatsu*. ⁴ Includes four 15,000-ton battleships of *Tsibiki* Class, believed to be similar to German "pocket battleships." ⁵ Of these the 7,000-ton *Ryuzo* may have been sunk. ⁶ Claims of cruiser losses and new construction are so varied and conflicting that it is impossible to state with accuracy how many Japan has built or of what tonnage. Also impossible to give underage and overage figures. ⁷ Exclusive of torpedo boats. ⁸ Does not include midget submarines.

Germany:										
Capital ships.....	4 ²	88	4 ²	88	2	84	3 ¹	78	1	26
Aircraft carriers.....	1 ³	19	1 ³	19	1 ³	19	...	...	...	...
Cruisers (8").....	4	40	4	40	...	...	...	10	...	...
Cruisers (6").....	4	23	4	23	4	32	2 ⁴	24	...	...
Destroyers.....	63 ⁵	69	63 ⁵	69	??	??	59 (est.)	??	??	??
Submarines.....	250-400	15-24	250-400	15-24	??	??	300+	180+	150+	90+
Total.....	326+	254+	326+	254+	...	...	365+	...	...	...

¹ *Tirpitz* damaged by British midget submarines, Sept. 22, 1943. ² Includes 2 pocket battleships, *Admiral Scheer* and *Lustow*. ³ Aircraft carrier *Peter Strasser* does not seem to have been completed. ⁴ Does not include *Leipzig* reported sunk by H. M. S. *Salmon*, December, 1939, but later reported towed to port, nor *Köln* reported sunk in action with Soviet warships, Sept. 28, 1941. ⁵ Includes 600-ton and 800-ton torpedo boats.

Italy (Ships surrendered to United Nations)										
Capital ships.....	2	70	5	139	...	...	2 ¹	58	1 ¹	35
Carriers.....	...	...	1 ²	5	...	...	...	...	...	...
Cruisers (8").....	...	...	...	...	...	...	...	60	...	10
Cruisers (6").....	8	49	8	49	...	...	7	??	3	??
Destroyers.....	...	...	39	??	...	...	70	??	??	??
Submarines.....	...	...	19	??	...	...	66	??	??	??
Total.....	...	...	72	...	...	...	161	...	...	...

¹ 35,000-ton *Roma* sunk September, 1943, by German aircraft; 23,000-ton *Conte di Cavour* seriously damaged by British aerial attack at Taranto, November, 1940. Now regarded as total loss. ² A seaplane carrier.

France (total reinforcement for United Nations' naval forces)										
Capital ships.....	2	70	3	92	...	...	...	...	...	...
Carriers.....	1	22	1	22	...	...	...	...	...	...
Cruisers (8").....	3	30	3	30	...	...	...	...	...	...
Cruisers (6").....	7	50	7	50	...	...	...	...	...	...
Destroyers.....	...	...	9 ¹	??	...	...	...	...	...	...
Submarines.....	...	...	14 ¹	??	...	...	...	...	...	...
Total.....	...	...	37	...	...	...	...	...	...	...

¹ Since names of destroyers and submarines are not known it is impossible to determine age or tonnage.

mans into action, until finally the *Scharnhorst* was sunk, December 26, in a convoy attack.

Relative Naval Strength. Further information on naval developments of the year is given in the accounts of the naval activities of various nations following and in the accompanying table showing the relative strength of the belligerent nations as of Jan. 1, 1943, together with new construction and losses up to the close of the year. Since full details of losses and new construction have not been published, some of the figures must be regarded as approximations only. It is evident, further, that as a result of the present stress on amphibian operations, anti-submarine warfare, and air warfare, the old yardsticks of naval strength by tonnage of major units has largely gone by the board, and the sea power of a nation, aside from its shipping, must be reckoned in a vast number of surface, air, and sub-surface craft, of bewildering variety and size.

Australia. Since her heavy losses of cruisers in the first year of the war with Japan, Australia has used her smaller fleet units constantly in protection of supply lines to New Guinea and other island bases. The heavy cruiser *Shropshire*, presented by Britain to Australia to replace the *Canberra*, will retain her present name, since the United States has given the name *Canberra* to a new cruiser launched April 19. The tribal class destroyer *Arunta*, added to the fleet at the close of last year, is the largest naval vessel built in

home yards in the past twelve years. The corvette *Wallaroo* was lost by collision on June 20.

Brazil. Among recent additions to the Brazilian navy are 10 steel sub-chasers turned over by the United States in the first half year. They are 35-knot boats of 335 tons. To take care of the needs of the expanding fleet, the Government has provided modern installations in the navy yard at Ilha das Cobras, placed powder magazines at various points, established the naval posts of the Amazon and of Recife, and constructed a base at Natal with a dry dock 460 by 85 feet. U.S. Air Force technicians are available at Natal and Recife, and full use of the facilities are granted to United States aircraft.

Canada. From its prewar strength of 15 ships and 1,700 men, the Canadian navy has expanded to over 550 units and over 67,000 men. The ships include 15 destroyers, four of them transferred from the British in June and renamed *Athabaskan*, *Huron*, *Haida*, and *Iroquois*; 80 corvettes, of which 54 were built in Canadian yards; and about 100 minesweepers and 40 MTBs. Four destroyers and numerous frigates are under construction. It has been stated that in the 18 months up to July Canadian ships provided nearly half the convoy protection in the North Atlantic. Seventeen Canadian corvettes were in the movement to North Africa and 5 operated with United States forces in the Aleutians. In the Mediterranean the corvettes were credited with destroying 3 submarines. One of

the corvettes, the *Weyburn*, was sunk near Gibraltar. The destroyer *St. Croix* (ex-U.S. *McCook*), was sunk September 9 in a 3-day convoy battle in the Atlantic, with a loss of all but one of her 147 men.

Denmark. An end came to the small Danish Navy in early August when to escape seizure by the Germans most of its 45 units were sunk or demolished by their crews. Among these were the coast defense vessel *Niels Juel*, 3,800 tons, sunk off Isefjord, and the *Peder Skram*, 3,500 tons, scuttled at Copenhagen, together with 3 torpedo-boats, a minelayer, 8 submarines, and a repair ship. Elsewhere, a minelayer and 3 old torpedo-boats were likewise disposed of. Two small sweepers, a torpedo-boat, and 9 MTBs were all that escaped to Sweden. The ships seized intact by the Germans were the new destroyer *Najaden*, the *Nymphen* (nearly completed) a torpedo-boat, a survey vessel, and others not mentioned.

France. Four French ships from North Africa were sent in February to the United States for refit and repair. They were the battleship *Richelieu*, the big cruiser-destroyers *Fantasque* and *Terrible* of 2,569 tons, and the 7,600 ton cruiser *Montcalm*. By November or earlier the first three were in service as part of the French Navy in Algiers. It was reported that both the *Richelieu* and the *Jean Bart* had received or would receive a new secondary battery of twenty 5-inch dual purpose guns and numerous smaller anti-aircraft weapons. Including the ships taken over in North Africa, at Alexandria, and in the West Indies, it was estimated that after refitting the French Navy might have available 3 battleships (*Richelieu*, *Jean Bart*, and *Lorraine*), one aircraft carrier (*Bearn*), 3 heavy and 6 light cruisers, 4 large and 5 smaller destroyers, 10 or 12 sloops, 14 submarines, and many auxiliaries. Of the ships at Toulon, it appeared unlikely that the Germans would find opportunity or means to put any back in service.

Fighting French Forces, now under the Committee of National Liberation, consisted early in the year of nearly 50 units and 6,600 men. They have been active in Atlantic convoy protection, and French cruisers, destroyers, and submarines had a part in the reoccupation of Corsica. In April the corvette *Aconit* was rammed and sunk by a U-boat.

Germany. For nearly two years the battleships *Tirpitz* and *Scharnhorst*, with the pocket battleship *Luetzow* and a number of other cruisers and destroyers, remained at Trondheim and other Norwegian bases. The *Tirpitz* had a share in a raid on Spitzbergen early in September and later took refuge in Alten Fjord, where she was damaged by British midget submarines. The *Scharnhorst* was cornered and sunk in an attempted convoy raid on December 26. Little use has been made of the aircraft carriers *Peter Strasser* (perhaps still unfinished) and *Graf Zeppelin*, though in October the latter was reported damaged on a voyage to Norway and forced to return to Stettin for repairs. In November the heavy cruiser *Hipper* was reported laid up in the Baltic, the *Gneisenau* in use as an anti-aircraft training ship at Gdynia, and the *Luetzow* also at Gdynia for overhaul. The results of a Flying Fortress raid on Gdynia October 8 were given as 8 ships sunk and 15 or 16 damaged, including one identified as a pocket battleship. Of the mutinous disturbances among submarine and other crews in Norway, during the summer and early autumn, little has been heard subsequently, though unquestionably the crews have suffered a decline in morale.

Great Britain. Of Britain's three 23,000 ton car-

riers under construction, the *Indomitable*, *Implacable*, and *Indefatigable*, the last two are near completion and have perhaps already joined the six in commission, *Indomitable*, *Formidable*, *Illustrious*, *Victorious*, *Furious*, and *Argus*. The *Formidable* and *Illustrious* were used in covering the Salerno landings, and the *Victorious* operated for many months with American forces in the Pacific. Britain has at least 15 first-line battleships—4 new 35,000 ton ships of the *King George V* class, the 33,900 ton *Nelson* and *Rodney*, the 32,000 ton battle cruiser *Renown*, 4 *Queen Elizabeths*, and 4 *Royal Sovereigns*. As compared with the 15- and 16-inch guns on the older ships, the *King George V* class carry ten 14-inch guns and sixteen 5.25. Four battleships, the *Nelson*, *Rodney*, *Warspite*, and *Valiant*, were used at the Salerno landings, together with the two fleet carriers mentioned, 5 auxiliary carriers, 3 light cruisers, and 7 destroyers. Of the completion of the four 40,000 tonners—*Lion*, *Temeraire*, and two unnamed—little has been revealed, but it is evident that British construction has been chiefly in the all-important mine, patrol, and escort types for commerce protection. The fleet includes 122 corvettes averaging about 1,000 tons each and carrying crews of 75 officers and men, drawn mostly from the naval reserve. Sloops number about 40, and there are 28 or more frigates of 1,600 tons. Numerous new escort carriers have been built in both British and American yards. The American-built *Battler* has a flight deck 450 by 80 feet and carries a complement of 75 officers and 450 men. Following the death of Sir Dudley Pound, Adm. Sir Andrew Cunningham on October 4 was appointed First Sea Lord of the Admiralty.

Greece. The Greek forces operating out of Alexandria include a cruiser, 10 destroyers, 3 torpedo-boats, 2 submarines, and 4 corvettes, under command of Rear Adm. C. Alexandris, former naval attaché in London. One of the 4 *Hunt* class destroyers turned over by the British has been renamed *Themistocles* in honor of the ancient Greek naval leader. The submarine *Katsomis* was torpedoed in the Aegean September 22 by a German sub-chaser, and the destroyer *Vasilissa Olga* was lost off Malta. Early in the year a 335-ton steel PC boat was presented to the Greek Navy by the United States.

India. The Indian Navy, which before the war numbered only 7 ships and a few hundred officers and men, has increased ten-fold in personnel and has shared largely in patrol work from the Arabian Sea to the Dutch Indies. A new torpedo and anti-submarine school at Bombay is the largest in the British Commonwealth outside the United Kingdom.

Italy. At the fall of Mussolini the Italian fleet which joined with those of the United Nations numbered upwards of 100 units. They included 5 battleships, *Italia* (former *Littorio*) and *Vittorio Veneto* of 35,000 tons, and the older *Andrea Doria*, *Cao Duilio*, and *Giulio Cesare* of 24,000; the converted seaplane carrier *Guisepe Miraglia* of 5,000 tons; about 8 light cruisers; 19 submarines; and 27 destroyers large and small, together with 12 torpedo-boats, 6 corvettes, and other auxiliaries. The battleship *Impero*, unfinished in a northern Adriatic port, fell into German hands, and the flagship *Roma* was sunk by German aircraft in the Strait of Bonifacio, while attempting escape. Of the 7 heavy cruisers with which Italy entered the war, only the *Bolzano* and *Gorizia* survived, too badly damaged to leave port. Aside from the *Impero*, not much of value seems to have remained for the

Germans. The *Octaviano Augusto*, damaged in November by Flying Fortresses at Ancona, was spoken of as the only Italian cruiser in German service. Italy lost a cruiser and 9 destroyers in April and May before the fall of Tunis and still others in the Sicilian operations. A report from Rome put the number of Italian submarines lost in the war at 84, or two-thirds of the total; up to January, 1943, the admitted loss was 43.

Japan. For Japanese naval strength, recourse may be had to the accompanying table, with allowance for uncertain data on both losses and additions. It is commonly estimated that Japan entered the war with 9 carriers, has lost 5 or 6, and with 4 new ones may now have 7 or 8, plus converted auxiliaries; that of battleships she has 10, including two new ones, with another nearing completion. This battleship estimate omits two lost in the Battle of Guadalcanal in November, 1942. The new battleships are powerful vessels of 40,000 to 46,000 tons with nine 16-inch guns and 40-knot speed. In cruisers the problem is puzzling, for Japan was credited at the beginning of the war with 38 cruisers, very moderate estimates have put her losses at 11 heavy and 18 light cruisers for a total of 29, yet she is believed to have still in operation as many as 30 to 35. Accepting these figures as a safe upper limit, we must assume that Japan's original strength was understated, her losses were overestimated, and her damage control and salvage were excellent. More recent Japanese losses have been noted. In general, the year's operations show a steadily mounting United Nations superiority in the Pacific theater.

Netherlands. Largest of the six "free" navies operating with the British, the Netherlands fleet has about 80 ships, with officer strength recruited from cadets who escaped from the naval college at Den Helder and also from a school at Surabaya. Among the ships added this year are a frigate, four new minesweepers, and a corvette, the latter received from the British and renamed *Friso* after a gunboat lost at the time of the German invasion. A new submarine, the *Dolfijn*, built in Britain, embodies some Dutch ideas in her design.

Norway. The Norwegian Navy began the year with about 60 vessels manned by 4,500 officers and crews, an increase of 2,000 over last year, and commanded by Rear Adm. Elias Corneliusen. Only 13 naval craft escaped from Norway, but to these the British added 4 ex-U.S. flush-deck destroyers and last year a new destroyer and a submarine, together with numerous corvettes and MTBs. Losses this year include the destroyer *Eskdale*, April 28, and a new submarine, the *Uredd*, in March. Nearly 1,000 Norwegians are manning guns on merchant ships.

Poland. Today the Polish Navy is limited to 6 destroyers and 3 submarines with 2,000 personnel. The loss of the destroyer *Orkan* was announced in October. The destroyers *Piorun*, *Slazak*, and *Krakowiak* were in the Italian operations, and the submarines *Sohol* and *Dzik* have scored successes in Mediterranean waters.

Sweden. Among the few remaining neutrals, Sweden is the only one with both means and incentive to build up a considerable naval force, designed wholly for coastal defense. According to the 1944 *Marinekalendern* (the Swedish *Jane*), the fleet now has 182 units as compared with 115 in 1939, and has 11 ships building, which include two 7,000 ton cruisers and a destroyer. The chief components of the fleet are 7 heavy coast defense ships (the three largest with 12-inch guns), 27 destroyers, 21 gunboats, and 26 submarines. Boats

completed this year include two 1,145 ton destroyers and the *Alvsnabben* of 4,200 tons, classed as a minelayer but to be used also as a mother ship for minesweepers and submarines. Two submarines, *U4* and *U5*, have been launched, and the submarine *Ulven*, sunk in April by German mines in Swedish waters, has been salvaged. Sweden also has a naval air force of 1,500 planes in 66 flotillas.

Union of Soviet Socialist Republics. The Pacific fleet of the Soviet Navy at Vladivostok, though inactive, has been maintained at its former strength of 60 to 70 submarines and about 50 MTBs. In the Arctic, operating out of Murmansk, both surface craft and submarines have been constantly occupied. In the Baltic base of Kronstadt and at Leningrad Swedish sources report that in spite of siege conditions a surprising amount of new construction is under way, including three or four big battleships and two 12,000 ton carriers. The old battleship *Red October* has been fitted with a new anti-aircraft battery of British pom-poms, and the large force of submarines has operated successfully against German shipping in the Baltic. Late in December a German report told of a 50-mile net, of unprecedented size, spread across the Gulf of Finland to check their exit. In the Black Sea the Russians have retaken the excellent harbor of Novorossiisk and have maintained their fleet at something like its former strength. British sources describe it as consisting of a 26,000 ton battleship, 4 modern light cruisers and an older one, 27 destroyers, 50 submarines, and 50 MTBs.

United States. The June Naval Appropriations Bill for \$27,637,226,198, the largest in history, provided about 9 billion for building and replacement of ships and 4½ billion for 29,000 more planes. In the three years ending July 1, 1943, there were added 333 combatant ships and 15,043 auxiliary types aggregating 2,218,000 displacement tons. The total navy at midyear amounted to nearly 5,000,000 tons, with 613 combat ships and about 18,000 planes. The number of planes was over 27,000 by December. Naval losses in the two years of war to the end of December, 1943, numbered 134 in all, including 1 battleship, 5 carriers (counting the auxiliary carrier *Liscombe Bay*), 6 heavy and 3 light cruisers, 39 destroyers, 16 submarines, and 64 of miscellaneous types.

Battleship strength includes four 35,000 ton ships commissioned in 1942, the *South Dakota*, *Indiana*, *Massachusetts*, and *Alabama*; the *North Carolina* and *Washington* of 1941; and two of 52,000 tons deep load displacement, the *Iowa* and *New Jersey*, commissioned this year. A third, of the *Iowa* type, the *Wisconsin*, is nearing completion. The *Iowas* are probably the most powerful ships afloat, with nine 16-inch guns, twenty 5-inch, and decks bristling with anti-aircraft armament. They are 880 feet over all, 108 feet in beam, and have a speed of 32 to 35 knots. The six battleships damaged at Pearl Harbor have been repaired, and with other older ships bring the total to 22.

To the three carriers left at the end of 1942, new construction has added eight 25,000 ton carriers of the *Essex* type, the *Essex*, *Lexington*, *Bunker Hill*, *Yorktown*, *Intrepid*, *Wasp*, *Hornet*, and *Franklin*. Nine smaller carriers have been launched and some of them are in commission; they are the *Independence*, *Princeton*, *Belleau Wood*, *Cowpens*, *Monterey*, *Cabot*, *Langley*, *Bataan*, and *San Jacinto*. Some 20 or more auxiliary carriers converted from merchant ships will also be operating by the year's end. Secretary Knox announced in October that work would begin immediately on three 45,000 ton carriers, to be ready

by 1945, heavily protected and providing a flight deck for the largest bombers.

In round numbers, in view of rapid increases, the navy now has at least 55 cruisers heavy and light, about 600 destroyers counting DEs, and about 180 submarines. Among new cruiser types are six 27,000 ton *Alaskas*, some of which will probably be finished next year; several 13,000 ton cruisers, of which the *Baltimore* is one of those recently completed, with eight 8-inch guns and twelve 5-inch; and numerous 10,000 ton *Montpeliers*, with twelve 6-inch and twelve 5-inch. The *Florikan* is a new type for submarine rescue work, and the new minelayer *Terror*, 6,000 tons, has been given the unusual speed of 25 knots. Building time for all types has been reduced from 25 to 60 per cent, as has also the time for repair work, which has been carried out not only on our own ships but on over 1,200 ships of our allies. Civilian naval workers have increased from 245,000 in 1941 to 677,000 in 1943. Merchant ship construction in 1943 surpassed the goal of 16,000,000 tons, or double that of last year, and amounted to about 19,000,000 tons. The bulk of this construction was in 11-knot, 11,500-ton Liberty ships, built by mass production, but with an increasing proportion of 15 to 17-knot Victory ships, C-type cargo ships, and fast tankers. In next year's 20,000,000 ton program about 500 of these are to be built. See SHIPBUILDING; SHIPPING.

The number of officers and men in the Navy increased during the year from 1,239,000 to 2,388,000. The Construction Battalions, recruited to their allotted strength of 200,000, are organized in 196 battalions, with 25 special battalions for cargo handling overseas. In July about 80,000 youths began the Navy V-12 program of college study in training for officer rating. The naval aviation training is now organized to produce 30,000 pilots and 100,000 mechanics each year. Naval personnel losses up to December 10 were 10,711 killed, 3,012 wounded, 8,337 missing, and 2,293 prisoners—a total of 24,353. The total for the Marine Corps was 13,553, and for the Coast Guard 439.

In April it was announced that the fleet commands of the Navy had been increased from three to seven. They have since been further increased and now include, in addition to the general Pacific command of Admiral Nimitz and the Atlantic command of Admiral Ingersoll, separate commands in the Southwest Pacific, South Pacific, Southeast Pacific, North Pacific, and North and South Atlantic. In July the growing importance of naval aviation was recognized by creating the office of Deputy Chief of Naval Operations (Air) and shifting Rear Adm. John S. McCain, former Chief of the Bureau of Aeronautics, to this new office with the rank of vice admiral. The former bureau divisions of planning, personnel, training, and information were also transferred to Operations. This means that aviation spokesmen will now have a larger and more direct share in planning and general naval strategy. Still another organizational change early in the year was the restoration, after 40 years, of the active rank of commodore, for stations of more limited responsibility than those assigned to a rear admiral.

For special branches of the service, see AERONAUTICS; COAST GUARD; PHOTOGRAPHY; also, COMBINED CHIEFS OF STAFF. For training programs, see DENTISTRY; EDUCATION; LIBRARY PROGRESS; UNIVERSITIES. For outlays on the U.S. Navy, see PUBLIC FINANCE; UNITED STATES under *Appropriations*. See also PORTS AND HARBORS and the topics listed under ARMED FORCES and MUNITIONS.

For naval warfare, see WORLD WAR. Compare AERONAUTICS; MILITARY PROGRESS.

ALLAN WESCOTT.

NAVY, U.S. The principal discussion of the U.S. Navy is under COAST GUARD, NAVAL PROGRESS, and WORLD WAR. See those articles and the topics there referred to.

NAZISM. See GERMANY, NETHERLANDS and the other occupied countries of Europe, under *History*.

NEBRASKA. A west north central State. Area: 77,237 sq. mi. Population: 1,315,834 (1940 census); 1,198,202 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Dwight Griswold (Rep.), inaugurated in January, 1943, for his second two-year term; Lieutenant Governor, Roy W. Johnson; Secretary of State, Frank Marsh; Attorney General, Walter R. Johnson.

NECROLOGY. The following is a list of notable persons who died during the year 1943.

Abd-El-Aziz, Muley. Sultan of Morocco from 1894 to 1908 when he abdicated; died in Tetuan, Spanish Morocco, June 9, 1943; born, 1877.

Aberhart, William. Canadian Premier of Alberta, Canada, since 1935 and proponent of social credit; died in Vancouver, B.C., Canada, May 23, 1943; born in Kippen, Ont., Canada, Dec. 30, 1878.

Adamowski, Timothée. Polish-American violin virtuoso and first violinist and soloist for the Boston Symphony Orchestra during 1884–1908; died in Boston, Mass., Apr. 18, 1943; born in Warsaw Poland, Mar. 24, 1858.

Allen, Edgar. Educator and chairman of the department of anatomy of the Yale School of Medicine, Yale University, since 1933; died in New Haven, Conn., Feb. 3, 1943; born in Canon City, Colo., May 2, 1892. Dr. Allen was noted for his contribution to the knowledge concerning female sex hormones.

Allen, Edmund T(urney). Noted test pilot and director of flight and aerodynamics for the Boeing Aircraft Company, Seattle, since 1939. Died in an airplane crash in Seattle, Wash., Feb. 18, 1943; born in Chicago, Jan. 4, 1896.

Ameringer, Oscar. Publisher, author and leader of the Socialist party in Oklahoma for 30 years; died in Oklahoma City, Okla., Nov. 5, 1943; born in Laubheim, Germany, 1870. In 1940 he published his autobiography, *If You Don't Weaken*.

Ames, Joseph Sweetman. Physicist, president of Johns Hopkins University during 1929–35, thereafter president emeritus, and chairman of the National Advisory Committee for Aeronautics from 1927 to 1939; died in Baltimore, Md., June 24, 1943; born in Manchester, Vt., July 3, 1864. Graduating from Johns Hopkins in 1888, he began his pedagogical career at the same institution, becoming successively assistant, associate professor and

professor of physics; he was appointed provost in 1926, arising to the presidency, 1929.

Although he spent half a century in the educational field, Dr. Ames was better known for his research work in the field of aeronautics. He was responsible for the development of numerous devices for safety and efficiency in all types of aircraft. In 1935 he was awarded the Langley Gold Medal of the Smithsonian Institution for "recognition of the surpassing improvement of the performance, efficiency and safety of American aircraft resulting from the fundamental scientific researches conducted by the National Advisory Committee for Aeronautics under the leadership of Dr. Ames."

Author: *Theory of Physics* (1897), *Free Expansion of Gases* (1898), *Elements of Physics* (1900), *Prismatic and Diffraction Spectra* (1898), *Text-Book of General Physics* (1904), and *The Constitution of Matter* (1913).

Anderson, John. Drama critic of the newspaper *New York Journal-American* since 1928, and author and playwright; died in New York City, July 16, 1943; born in Pensacola, Fla., Oct. 18, 1896.

Andrews, Charles McLean. Educator and historian; died in New Haven, Conn., Sept. 10, 1943; born in Wethersfield, Conn., Feb. 22, 1863. Graduated from Trinity College, Conn., with a B.A. degree in 1884, he went to Bryn Mawr College as an associate professor of history in 1889, becoming a full professor before leaving in 1907 to join the faculty of Johns Hopkins University as professor of history, 1907-10. During 1910 he went to Yale University as Farnum professor of American history, retiring in 1931 as professor emeritus.

Considered the leading authority on the history of the American Colonies, he received a Pulitzer Prize in 1935 for the first volume of the monumental work, *The Colonial Period of American History*. Volume two was published in 1936, volume three 1937, volume four 1938. Among his other publications may be mentioned, *The River Towns of Connecticut* (1889), *The Old English Manor* (1892), *Development of Modern Europe* (2 vols., 1896, 1898), *Contemporary Europe, Asia and Africa, 1871-1901* (1902), *Colonial Self-Government 1652-1689* (1904), *The Colonial Background of the American Revolution* (1924, 1931).

Andrews, Frank Maxwell. Lieutenant general, U.S. Army; commander of United States forces in European theater since Feb. 5, 1943; died in an airplane accident in Iceland, May 3, 1943; born in Nashville, Tenn., Feb. 3, 1884. During World War I General Andrews served in the Air Division at Washington. With the reorganization of the Army Air Corps in 1934-35, he received command of the General Headquarters Air Force. Subsequently (1939) he became Assistant Chief of Staff for Operations and Training; thence returning to active duty in 1940 as head of the Panama air forces; and finally receiving command (1941) over all Army forces at Panama, in addition to the Caribbean Defense Command, involving all units. In November, 1942, he was promoted to head the American forces in the Middle East; from where he went to the European scene of operations.

For years General Andrews had been a strong advocate of a powerful Army air arm. It was under his supervision that the American Flying Fortresses were developed, and during his tenure as commander of the General Headquarters Air Force laid the foundation for the present air force.

Andrews, John B(ertram). Economist; secretary of the American Association for Labor Legislation since 1909, founder (1911) and editor of the *American Labor Legislation Review*, and prominent

figure in the field of social and labor legislation; died in New York City, Jan. 4, 1943; born in South Wayne, Wis., Aug. 2, 1880. A contributor to *The New International Year Book* since 1925, Dr. Andrews was the author of numerous writings on labor subjects, including *Labor Problems and Labor Legislation* (1922), *Administrative Labor Legislation* (1936), *British Factory Inspection* (1937), *Labor Laws in Action* (1938), *State Insurance Funds* (1939).

Angus, Samuel. Irish theologian and educator; died in Sydney, Australia, Nov. 17, 1943; born in Ireland, Aug. 27, 1881. Author: *The Environment of Early Christianity* (1914), *The Mystery-Religions and Christianity* (1925), *Jesus in the Lives of Men* (1933), *Essential Christianity* (1939).

Antisdel, C(larence) B(aumes). President of Benedict College, South Carolina, from 1921 to 1930, thereafter emeritus; died in Columbia, S.C., Oct. 27, 1943; born in Afton, Wis., Nov. 18, 1863.

Appleyard, Rollo. British cable engineer, physicist and inventor; died in London, England, Mar. 1, 1943; born, Jan. 1, 1867. The inventor of a meter for the measurement of electrical conductivity and various aeronautical and other instruments, he also did research work in dielectrics, alloys, thermometry, and surface tension.

Armitage, Albert Borlase. British Arctic explorer; died in London, England, Nov. 2, 1943; born in Balquhiddie, Perthshire, Scotland, July 2, 1864. Captain Armitage was second in command of the Jackson-Harmsworth North Pole Expedition of 1894-97, and of the British National Antarctic Expedition in 1901-04. Author: *Two Years in the Antarctic* (1905), *Cadet to Commodore* (1925), *Cold Lands* (1931).

Aronson, Naoum. Russian Jewish sculptor whose works are displayed in museums throughout Europe; died in New York City, Sept. 30, 1943; born in Kreslawka, Russia, 1872. Considered one of the preeminent artists of modern times, he was particularly noted for his bronze busts of Foch, Pasteur, Beethoven, Tolstoi, Rasputin, and Lenin.

Babb, Max W(ellington). President of the Allis-Chalmers Manufacturing Company, Milwaukee, during 1932-42, thereafter chairman of the board; died in Milwaukee, Wis., Mar. 13, 1943; born in Mt. Pleasant, Ia., July 28, 1874.

Ball, Elmer Darwin. Entomologist and Assistant United States Secretary of Agriculture in 1920-21; died in Pasadena, Calif., Oct. 5, 1943; born in Athens, Vt., Sept. 21, 1870.

Ball, Frank C(layton). President of the Ball Brothers Company, largest manufacturers of Mason jars, industrialist and philanthropist; died in Muncie, Ind., Mar. 19, 1943; born in Greensburg, O., Nov. 24, 1857.

Barbour, Percy E. Consulting mining engineer and world authority on the economics of copper, gold and silver; died in Lima, Peru, May 4, 1943; born in Portland, Me., Aug. 1, 1875.

Barbour, W. Warren. Republican Senator from New Jersey; died in Washington, D.C., Nov. 22, 1943; born at Monmouth Beach, N.J., July 31, 1888. He was appointed a member of the U.S. Senate on Dec. 1, 1931, to fill the vacancy caused by the death of Dwight Morrow. In the general elections of 1932, he was elected to the Senate for the term expiring 1937; elected, November, 1938, to fill the vacancy for term ending Jan. 3, 1941; re-elected, Nov. 5, 1940, for a full term.

Senator Barbour was recognized as a liberal statesman. He decried centralization of government and government control of private industry. He was a severe critic of the New Deal's agricultural policies because he considered it based on the errone-

ous principle of scarcity rather than the theory of abundance. On the other hand, he supported such Administration measures as the Social Security Act, the Wagner-Elbogen Housing Bill, and the Railroad Retirement Act.

Barker, Lewellys Franklin. International authority on eugenics, heredity and neurology, and professor of medicine at Johns Hopkins University during 1905-13, thereafter professor emeritus; died in Baltimore, Md., July 13, 1943; born in Norwich, Ontario, Canada, Sept. 16, 1867.

Barton, Pamela. British holder of both the British and American women's golf championships in 1936 and again British title-holder in 1939, and since 1941 a member of the British Women's Auxiliary Air Force, in which she was a flight officer; died in a plane that crashed on taking off from an RAF field in Kent, England, Nov. 13, 1943; born in England, 1917.

Beatty, Sir Edward (Wentworth). Canadian president of the Canadian Pacific Railway Company from 1918 to 1942; died in Montreal, Canada, Mar. 23, 1943; born in Thorold, Ontario, Canada, Oct. 16, 1877.

Beers, Clifford Whittingham. Founder of the National Committee for Mental Hygiene (1909), a movement which spread throughout the United States and the world to secure better treatment for the mentally ill; died in Providence, R.I., July 9, 1943; born in New Haven, Conn., Mar. 30, 1876. Himself incarcerated in a mental institute for some years, Beers recovered to devote the rest of his life to improving the treatment of the mentally unbalanced. In 1928 he founded the American Foundation for Mental Hygiene, serving as secretary of the organization thereafter. Author: *A Mind That Found Itself* (autobiography, 1908, 24th ed. 1939).

Bell, Edward Price. London (England) correspondent of *The Chicago Daily News* during 1900-23 and a nominee for the Nobel Peace Prize in 1930; died in Gulfport, Miss., Sept. 23, 1943; born in Parke Co., Ind., Mar. 1, 1869. A proponent of world peace and especially of closer relations between the United States and Great Britain, his publications include *World Chancelleries* (1925), *Europe's Economic Sunrise* (1927), *Primary Diplomacy* (1933), *Studies of Great Political Personalities* (1938).

Benét, Stephen Vincent. Author and poet; died in New York City, Mar. 13, 1943; born in Bethlehem, Penn., July 22, 1898. He was graduated from Yale University in 1919; M.A., 1920. While a Freshman student at Yale he published *Young Adventure* (1918), and won the John Masefield poetry prize. These early poems displayed a precocious facility which later developed into the whimsical and bizarre expressions at which he was so able.

His two most famous works are *John Brown's Body* (1928) and *The Devil and Daniel Webster* (1937). The former, for which he won the Pulitzer Prize in 1928, is a swiftly-moving narrative poem of the Civil War and was considered "a nationalizing influence which filled an important gap in the nation's cultural tradition and which tended to knit all Americans closer together." The other work is a delightful New England fantasy and folk story which was made into a folk-opera and subsequently into a motion picture, entitled *All That Money Can Buy*.

His other published works include *Heavens and Earth* (1920), *The Beginning of Wisdom* (1921), *Jean Huguenot* (1923), *Tiger-Joy* (1925), *Spanish Bayonet* (1926), *Ballads and Poems* (1931), *A Book of Americans* (with Rosemary Carr Benét, 1933), *James Shore's Daughter* (1934), *Burning City* (1936), *Thirteen o'Clock* (1937), *Johnny Pye*

and *the Fool Killer* (1938), *Tales Before Midnight* (1939), *Nightmare at Noon* (1940), and *The Selected works of Stephen Vincent Benét* (1942).

Among the many honors awarded him was the Roosevelt Medal (1933), the honorary degree of Litt.D. from Yale (1937), and membership in the American Academy of Arts and Letters (1938).

Bernie, Ben. Stage, screen and radio star; died in Beverly Hills, Calif., Oct. 20, 1943; born in Bayonne, N.J., May 30, 1891, or in New York City, 1892. Since 1922 the "Old Maestro" had been the leader of a popular dance band. His theme song was one of the most sentimental and best-liked of any: "Au revoir," he vocalized, "A fond cheerio, a bit of toodle-oo, God bless you, and plea-sant dreams."

Bevan, Edwyn Robert. British historian and archeologist; died in England, Oct. 19, 1943; born in London, England, February, 1870.

Bidou, Henry. French drama critic; died in France, Feb. (?), 1943; born, 1873. Author: *L'année dramatique* (1912); *La terre héroïque* (1919); *Chopin* (1926); *La Châteaufort de Blois* (1931).

Bikaner, Maharajah of, Sir Ganga Singhji Badhadur. Indian ruler of Bikaner, a State of India, since 1887; died in Bombay, India, Feb. 2, 1943; born, Oct. 13, 1880. The Maharajah was one of the first Indian princes to offer his troops to England in World War I and his famous Ganga Risala (camel corps) helped maintain the British control of the Suez Canal. He was the first Chancellor of the Chamber of Princes (1921-26), and represented the Ruling Princes of India at the League of Nations in 1924.

Binyon, Laurence. British poet and writer; died in Reading, England, Mar. 10, 1943; born in Lancaster, England, Aug. 10, 1869. Although the author of some 20 volumes, Dr. Binyon was best known by the four lines from his ode *For the Fallen*, written during the first World War:

They shall grow not old, as we that are left grow old;
Age shall not weary them, nor the years condemn.
At the going down of the sun and in the morning
We will remember them.

Birch, Reginald Bathurst. British-American artist and illustrator, who was best known for his illustrations of Frances Hodgson Burnett's *Little Lord Fauntleroy*; died in New York City, June 17, 1943; born in London, England, May 2, 1856.

Blackie, Ernest Morell. British Bishop, dean of Rochester since 1937 and honorary chaplain to the late King George V in 1914-18, chaplain to that sovereign during 1918-30; died in Rochester, England, Mar. 5, 1943; born, Aug. 19, 1867.

Blake, Edgar. Methodist Church Bishop (1920-40); died in Coral Gables, Fla., May 26, 1943; born in Gorham, Me., Dec. 8, 1869. One of the most progressive leaders of Methodism, Bishop Blake was ordained in the Church in 1899.

Blanco Galindo, Carlos. Bolivian head of the military junta which ruled Bolivia during 1930-31 and Minister for National Defense since November, 1940; died at Cochabamba, Bolivia, Oct. 2, 1943; born there, Mar. 12, 1882. Gen. Blanco Galindo was chief of the General Staff in 1920, and in 1932, during the Chaco War with Paraguay, was director-general of supplies. His publications include *Historia militar de Bolivia*; *Campañas de Napoleón con sus cartas*; *Crónicas del año*.

Blatchford, Robert. British Socialist, journalist, and author of numerous works, including *Merrie England*, *Tommy Atkins*, *Dismal England*, *A Book About Books* (1902), *Not Guilty, A Plea for the Bottom Dog* (1905), *My Eighty Years* (1931); died in Sussex, England, Dec. 17, 1943; born in Maidstone, England, Mar. 17, 1851.

Bledsoe, Jules. Negro opera and musical comedy baritone, who sang *Ol' Man River* in the play *Show Boat* (1927); died in Hollywood, Calif., July 14, 1943; born in Waco, Tex., Dec. 29, 1898.

Boris III. King of Bulgaria, succeeding his father, King Ferdinand, on the latter's abdication, Oct. 3, 1918; the eldest son of King Ferdinand and Princess Marie Louise of Bourbon-Parma, he was a great-grandson of King Louis Philippe of France; on Oct. 25, 1930, he married Princess Giovanna, daughter of King Victor Emmanuel III of Italy; reportedly assassinated by German agents at a small railway station outside of Sofia, Bulgaria, August 24, died, Aug. 28, 1943; born in Sofia, Jan. 30, 1894.

King Boris was born in the Roman Catholic faith, but in 1896 his religion was changed, for political reasons, to Orthodox. He received his education in Bulgaria by tutors and at the Military Academy at Sofia. Subsequently he was aide-de-camp to the King and several generals and was a major in the first Balkan War (1912). During the second Balkan War (1913) and World War I he served on the staff of his father. Upon his accession to the throne, he was a general and commander of the Fourth Infantry, Fourth Cavalry, and Third Artillery Regiments.

Up to the beginning of developments that led to World War II, Boris acted strictly as a constitutional king, keeping in the background of politics. For activities of Boris during World War II, see YEAR BOOKS for 1940-43 under BULGARIA.

Boris Vladimirovitch, Grand Duke. Russian cousin of Czar Nicholas II, son of Grand Duke Vladimir Alexandrovitch and grandson of Czar Alexander III; died in Paris, France, Nov. 8, 1943; born in St. Petersburg, Nov. 12, 1877.

Bosworth, Hobart Van Zandt. Screen actor in more than 550 pictures, director, and producer; died in Glendale, Calif., Dec. 30, 1943; born in Marietta, Ohio, Aug. 11, 1867. The dean of motion picture actors, he became identified with the screen in 1909, after a successful theatrical career that dated from 1885 to the early 1900s. In 1909 he starred in *The Sultan's Power*, the first movie made in Hollywood. Among the silent pictures in which he appeared prominently were *Behind the Door*, *Woman of Affairs*, *King of the Mountain*; two of his most famous roles were the Patriarch in *The Miracle Man* and General Lee in *Abraham Lincoln*. Some of Mr. Bosworth's pictures since 1929 were *Hurricane*; *Eternal Love*; *DuBarry*, *Woman of Passion*; *The Devil's Holiday*; *A Man of Peace*; *Dirigible*; *Shippmates*; *Bad Timber*; and *County Fair*.

Boutens, Pieter C. Dutch poet and translator of Aeschylus and other Greek poets; died at The Hague, the Netherlands, Mar. 18, 1943; born at Middleburg, Isle of Walcheren, Feb. 20, 1870.

Bowring, Sir Edgar Rennie. British High Commissioner for Newfoundland in 1918-22 and 1933-34; died in London, England, June 23, 1943; born in St. John's, Newfoundland, Aug. 17, 1858.

Bracco, Roberto. Italian dramatist and novelist; died in Naples, Italy, Apr. 21, 1943; born in Naples, 1862. He was the author of 40 plays and six volumes of stories.

Bragg, Caleb S. Prominent figure in the aviation, automobile and motorboat field; died in New York City, Oct. 24, 1943; born in Cincinnati, Ohio, Nov. 26, 1886.

Bridgman, George B. Art teacher, famous for his books on anatomical drawing, including *Constructive Anatomy* (1920), *Life Drawing* (1925), and *The Seven Laws of Folds* (1942); died in New Rochelle, N.Y., Dec. 16, 1943; born in Bing,

County of Monk, Canada, Nov. 5, 1864. For 38 years, until his retirement in September, 1943, he taught at the Art Students League in New York.

Brown, William Adams. Presbyterian minister, professor of applied theology at Union Theological Seminary, New York City, during 1930-36, being associated with the Seminary from 1895, and member of the Yale Corporation during 1917-34, acting as provost of Yale University from 1919 to 1920; died in New York City, Dec. 15, 1943; born there, Dec. 29, 1865. Dr. Brown had held many prominent positions in the Presbyterian Church and was the author of over 15 religious works.

Bruce, Edward. Lawyer, artist, and chief of the fine arts section of the U.S. Public Buildings Administration since 1933, which he inaugurated in that year for the relief of unemployed artists; died in Hollywood, Calif., Jan. 27, 1943; born in Dover Plains, N.Y., Apr. 13, 1879.

Bryan, George Sands. Editor and author; died in Mount Vernon, N.Y., Dec. 22, 1943; born in Matteawan, N.Y., Sept. 6, 1879. In 1900 he was on the editorial staff of *The New International Year Book* and during 1900-03 was an editor for *The New International Encyclopedia*. His publications include *Sam Houston* (1917), *The Man and His Work* (1926), *Yankee Notions* (verse, 1926), *The Great American Myth: The True Story of Lincoln's Murder* (1940), *Mystery Ship* (1942), *The Spy in America* (1943).

Bryon, Arthur. Noted stage and screen actor and president of Actors' Equity Association in 1938; died in Los Angeles, Calif., July 16, 1943; born in Brooklyn, N.Y., Apr. 3, 1872.

Bumpus, Hermon Carey. Educator, biologist, and zoologist; died in Pasadena, Calif., June 21, 1943; born in Buckfield, Me., May 5, 1862. Dr. Bumpus was director of the American Museum of Natural History, New York, from 1902 to 1911, and was president of Tufts College, Mass., during 1914-19.

Bunge, Alejandro E. Argentine engineer, statistician and economist; died in Buenos Aires, Argentina, May 24, 1943; born in Buenos Aires, Jan. 8, 1880. Author: *Riqueza y renta*; *Ferrocarriles argentinos*; *Problemas económicos del presente*; *Las industrias del Norte*.

Burns, John. British Member of Parliament from Battersea from 1892 to 1918; died in London, England, Jan. 24, 1943; born in London, Oct. 20, 1858. The first workingman to become a member of the British Cabinet, he was president of the Board of Trade in 1914, resigning in protest against Britain's declaration of war on Germany.

Cajander, Aino Kaarlo. Finnish statesman, Prime Minister in 1922-24 and again 1937-39, resigning upon the outbreak of war with Russia in November; died in Helsinki, Finland, Jan. 21, 1943; born, 1879.

Calder, Frank. British-Canadian president of the National Hockey League since its foundation in 1917; died in Montreal, Canada, Feb. 4, 1943; born in Bristol, England, Nov. 17, 1877.

Cannon, Sylvester Q(uayle). Presiding Bishop of the Church of Latter-day Saints from 1925 to 1938; died in Salt Lake City, Utah, May 29, 1943; born in Salt Lake City, June 10, 1877.

Capps, Frank L. Inventor, who pioneered in the American phonograph-recording industry and was the holder of more than 50 patents in that field; died in New York City, June 2, 1943; born in Illinois, Ill., 1867.

Carlyle, Alexander James. British religious leader and authority on English literature, economics, and political science; died in Holywell, Oxford, England, May 28, 1943; born, July 24, 1861. Dr.

Carlyle was the author of numerous religious and historical works.

Carver, George Washington. Negro educator and scientist; died in Tuskegee, Ala., Jan. 5, 1943; born on a farm near Diamond Grove, Mo., 1864. His parents were slaves. In infancy he and his mother were stolen and carried into Arkansas. His father succeeded in ransoming him for a race horse valued at \$300. His mother was not returned and was not heard of again; the father died shortly after in an accident. Dr. Carver eventually worked his way to Minneapolis, Kan., where he put himself through high school and later through the Iowa State College of Agriculture and Mechanic Arts; B.S. Agr., 1894, M.S. Agr., 1896. Upon his graduation, Dr. Carver was elected a member of the State College faculty and placed in charge of the college greenhouse, where he devoted particular attention to bacterial laboratory work in systematic botany. In 1896 he made the acquaintance of the late Booker T. Washington who at once called him to the Tuskegee Institute. As director of the Department of Agricultural Research at Tuskegee, Dr. Carver stayed there the remainder of his life, devoting himself to the development of hundreds of new uses for agricultural products.

From extensive study and experiment with the peanut he developed from it more than 300 synthetic products, including milk, butter, cheese, coffee, various oils, dyes, soaps, flour, ink, and cosmetics. From sweet potatoes he produced over 118 substances, including starch, vinegar, shoe-blackening, flour, library paste, and candies. He also produced dyes from clay, dandelions, onions, beans, tomato vines, and trees.

A great deal of the credit for developing the peanut into large-scale production in the South must go to Dr. Carver. In 1921, in support of a tariff on peanuts, Dr. Carver appeared before the House Ways and Means Committee, and displayed and lectured on the numerous synthetics produced from the peanut. The Committee termed it "a most wonderful exhibition"; and the measure when passed carried the tariff on peanuts.

Dr. Carver was somewhat of a unique scientist in that he professed to believe that all his products were the work of God, rather than of science. He never attempted to patent any of his discoveries, instead he gave freely to every one who would learn about them, saying in defense of his attitude, "My discoveries come like a direct revelation from God."

In 1923 the National Association for the Advancement of Colored People awarded him the Spingarn Medal for discoveries that would change the economic life of the South. In 1934 he was made collaborator in the Bureau of Plant Industry of the U.S. Department of Agriculture, division of plant mycology and disease survey.

Cattani-Amadori, Federico. Italian Roman Catholic Cardinal since 1935; died in Rome, Italy, Apr. 12, 1943; born in Marradi, Italy, Apr. 17, 1856.

Cavallero, Ugo. Italian Commander in Chief of the Italian Armed Forces and head of the General Staff until the surrender of Italy to the Allies (World War II) on Sept. 8, 1943; died, according to the Italian Stefani news agency, by suicide, probably in Rome, Italy, September (?), 1943.

Chaptal, Emmanuel Anatole. French ecclesiastic, Titular Bishop of Isonda and Assistant Cardinal-Archbishop of Paris since 1922; died in Paris, France, May 28 (?), 1943; born in Paris, Dec. 25, 1861.

Cherington, Paul Terry. Prominent authority on marketing and distribution, who had been a part-

ner in McKinsey & Company, New York, management consultants, since 1939; died in Philadelphia, Apr. 24, 1943; born in Ottawa, Kan., Oct. 31, 1876. Author: *The First Advertising Book* (1916), *The Elements of Marketing* (1920), *College Education for Business* (1925), *People's Wants and How to Satisfy Them* (1935).

Chittenden, Russell Henry. Distinguished scientist and world authority on nutrition, who made valuable discoveries in chemistry; died in New Haven, Conn., Dec. 26, 1943; born there, Feb. 18, 1856. Dr. Chittenden graduated from the Sheffield Scientific School of Yale University in 1875, the same year in which he isolated glycocoll and glycogen in scallops—the first time that a free amino acid had been isolated in living tissue—later recognized as protein. In 1877 he became an instructor in chemistry at Yale, studied in Heidelberg, in 1878–79, and received his doctor's degree at Yale in 1880. From 1882 to 1922 he held the position of professor of physiological chemistry at Yale, thereafter emeritus, and during 1898–1922 was director of the Sheffield Scientific School. He was lecturer on physiological chemistry at Columbia University in 1898–1903.

Dr. Chittenden was the author of several standard works, including *Digestive Proteolysis* (1895), *Physiological Economy in Nutrition* (1905), *Nutrition of Man* (1907), *History of the Sheffield Scientific School* (2 vols., 1923), and *Development of Physiological Chemistry in the United States* (1930). He served as editor for the four-volume *Studies in Physiological Chemistry* (1884, 1901).

Choynski, Joe. One of the last great fighters of the bare knuckle era of prize fighting, who fought such greats as Jack Johnson, Jim Jeffries, and Jim Corbett; died in Cincinnati, O., Jan. 24, 1943; born in San Francisco, Nov. 8, 1869.

Church, Samuel Harden. President of the Carnegie Institute since 1914; died in Pittsburgh, Pa., Oct. 11, 1943; born in Caldwell Co., Mo., Jan. 24, 1858. Dr. Church was undoubtedly best known for his proposals of extreme measures against the wartime leaders of Germany, both in World War I and II. For a period of one month, May, 1940, Dr. Church offered a reward of \$1,000,000 for the capture of Hitler, alive and unhurt. He was one of the earliest to raise his voice against the prohibition heresy. He became assistant secretary of the Pennsylvania Railway Company in 1920, holding the rank of vice-president when he retired in 1928.

A distinguished historian, his publications include *Cromwell, a History* (1894), *John Marmaduke* (1897), *Corporate History of the Pennsylvania Railroad Lines West of Pittsburgh* (15 vols., 1898–1920), *The American Verdict on the War* (1915), *The Liberal Party in America* (1931).

Cline, Pierce. President of Centenary College, Louisiana, since 1933; died in Shreveport, La., Oct. 25, 1943; born in Waleska, Ga., Feb. 17, 1890.

Coates, Joseph Gordon. New Zealand statesman, Prime Minister during 1925–28, member of the War Cabinet in World War II since 1940, and Minister of Armed Forces and War Coordination from July 1, 1942; born in Matakohu, New Zealand, 1878; died in Wellington, New Zealand, May 27, 1943.

Coffroth, James W. (Sunny Jim). Dean of American boxing promoters and former horse-racing figure; died in San Diego, Calif., Feb. 6, 1943; born in Sacramento, Calif., Sept. 12, 1872.

Colles, Henry Cope. British music critic of *The Times* of London since 1911; died in London, Mar. 5, 1943; born at Bridgenorth, Salop, England,

1879. Author: *Brahms* (1908), *The Growth of Music* (1912-16), *Voice and Verse* (1928), *The Royal College of Music* (1933), *On Learning Music and Other Essays* (1940).

Collingwood, Robin George. British educator and authority on the Roman occupation of England; died, Jan. 11, 1943; born, 1889. Author: *Religion and Philosophy* (1916), *Roman Britain* (1921), *Archaeology of Roman Britain* (1930), *Human Nature and Human History* (1936), and *The New Leviathan* (1942).

Collins, James J. (Jimmy). Star baseball player; died in Buffalo, N.Y., Mar. 6, 1943; born in Niagara Falls, N.Y., 1869. Generally regarded as the greatest third baseman of all time, Collins played in the majors during 1895-1907. He starred in the National League for the Boston Braves during 1896-1900, and, when the American League was organized in 1901, joined the Boston Red Sox, where he piloted the Sox to pennants in 1903 and 1904 and to victory over the Pittsburgh Pirates in the first world series, 1903. Collins had a lifetime batting average of .296 and a fielding average of .929.

Connaught, Alastair Arthur, Duke of. Great-grandson of Queen Victoria, son of Duchess of Fife and Prince Arthur of Connaught, and second cousin once removed of King George VI of England; died in Ottawa, Ontario, Canada, Apr. 26, 1943; born, Aug. 9, 1914.

Coriat, Isador Henry. Psychiatrist and neurologist, pioneer in the field of the psychoanalysis of stammering; died in Boston, Mass., May 26, 1943; born in Philadelphia, Dec. 10, 1875. Author: *Abnormal Psychology* (1910), *The Meaning of Dreams* (1915), *What Is Psychoanalysis?* (1917), *Stammering* (1928).

Cotsworth, Moses B. British maker of new calendar which divided the year into 13 months of 28 days each, with an odd "Year Day" added to December, and a like addition to June, also without a week-day name, for leap year; died in Vancouver, B.C., Canada, June 5, 1943; born in Willitof, near York, England, Dec. 3, 1859.

Cottenham, 6th Earl of, Mark Everard Pepys. British automobile race driver and author of several books on motoring; died in London, England, July 20, 1943; born, May 29, 1903.

Cremonesi, Carlo. Italian Roman Catholic Cardinal; died, Nov. 25, 1943; born in Rome, Italy, 1866. Cardinal Cremonesi was formerly secret eleemosynar, or supervisor of the distribution of papal charities, and Vatican official.

Crile, George (Washington). Surgeon and scientist; died in Cleveland, O., Jan. 7, 1943; born in Chili, O., Nov. 11, 1864. In 1905 Dr. Crile performed the first direct blood transfusion, and also during that year discovered that adrenalin could make the apparently dead breathe again and publicly resuscitated a dog which had "died" some minutes before. He perfected important features in the present blood-transfusion technique and performed the first successful thyroid operation, a type of surgery in which he was supreme. He successfully treated one kind of high blood pressure by severing sympathetic nerves, announced that similar denervation of the adrenal glands relieved hyperactivity of the thyroid.

Dr. Crile's most important discovery was nerve-block anesthesia. Using nitrous oxide and novocain, he shut off an operated area from the brain and by so depriving it of feeling eliminated the perilous nervous exhaustion that is surgical shock. In 1921 Dr. Crile and others founded the Cleveland Clinic for clinical and research activities.

Among his numerous publications were *Surgical*

Shock (1897), *Certain Problems Relating to Surgical Operation* (1901), *Origin and Nature of the Emotions* (1915), *Notes on Military Surgery* (1924), *A Bipolar Theory of Living Processes* (1926), *Problems in Surgery* (1928), *The Surgical Treatment of Hypertension* (1938), *Intelligence Power and Personality* (1941).

Crumit, Frank. Radio singer and former musical comedy star; died in New York City, Sept. 7, 1943; born in Jackson, O., 1889. After his retirement from the stage in 1927, he entered radio, and in 1930 teamed up with his wife, Julia Sanderson, actress, to form the quiz program known as the "Battle of the Sexes," which continued as a favorite program with the radio audience up to his death.

Cudahy, John Clarence. Ambassador to Poland (1933-37), Minister to Ireland (1937-39), and Ambassador to Belgium and Minister to Luxembourg (1939-40); died when he was thrown from his horse while riding on his estate near Milwaukee, Wis., Sept. 6, 1943; born in Milwaukee, Dec. 10, 1887.

Currell, William Spenser. President of the University of South Carolina, Columbia, from 1914 to 1922; died in Asheville, N.C., July 17, 1943; born in Charleston, S.C., May 13, 1858.

Dafoe, Allan Roy. Canadian medical doctor who attended the birth of the Dionne quintuplets on May 28, 1934; died in North Bay, Ontario, Canada, June 2, 1943; born, May 29, 1888.

Darwin, Leonard. British scientist and last surviving son of Charles Darwin, author of *The Origin of Species*; died in Forest Row, Sussex, England, Mar. 26, 1943; born, Jan. 15, 1850. Major Darwin, Royal Engineers, was a Liberal Unionist Member of Parliament during 1892-95, and president of the Royal Geographical Society, 1908 to 1911, and the Eugenics Education Society, 1911 to 1928. Author: *Bimetallism* (1898), *Municipal Trade* (1903), *The Need for Eugenic Reform* (1926).

Davis, Jonathan M(cMillan). Democratic Governor of Kansas from 1923 to 1925; died in Fort Scott, Kan., June 27, 1943; born in Franklin Twp., Bourbon Co., Kan., Apr. 26, 1871.

Debeney, Marie Eugene. French general (ret. 1930); died in Bourg-en-bresse, France, Nov. 9, 1943; born there, 1864. General Debeney was commander of the First French Army in World War I which won the Battle of Montdidier in 1918. He was commander of the High War School and Centre des Hautes Etudes Militaires (1920-24); Chief of Army Staff (1924-30); and member of the Supreme War Council (1930-34).

Delafield, E. M. (Mrs. Elizabeth Monica Dashwood). British author of more than 40 books, most of them novels and best-sellers, including *Tension* (1920), *Humbug* (1922), *What is Love* (1928), *Diary of a Provincial Lady* (1931), *The Provincial Lady Goes Further* (1932), *The Provincial Lady in London* (1933), *The Provincial Lady in America* (1934), *Straw Without Bricks* (1937), *The Brontës* (1938), *The Provincial Lady in Wartime* (1940), *No One Now Will Know* (1941); died in Cullompton, Devonshire, England, Dec. 2, 1943; born, 1891.

De Leath, Vaughn. Singer and composer, who was the first woman whose singing voice was heard over the radio (1920); died in Buffalo, N.Y., May 28, 1943; born in Mount Pulaski, Ill., Sept. 26, 1900. Known as "The First Lady of Radio," she was generally credited with introducing the "crooning" style of singing. She wrote more than 500 songs, among them *Don't You Care*, *Heigh-Ho Silver*, *I Wasn't Lying When I Said I Loved You*, *Madonna's Lullaby*, and *It's a Lonely Trail*.

Dennis, Charles H(enry). Reporter, foreign correspondent, managing editor (1892-1901), and editor (1925-34) during his 62 years (1882-1943) on *The Chicago Daily News*; died in Chicago, Sept. 25, 1943; born in Decatur, Ill., Feb. 8, 1860.

Denny, Collins. Bishop of the Methodist Episcopal Church, South, from 1910 to 1934; died in Richmond, Va., May 12, 1943; born in Winchester, Va., May 28, 1854. Author: *Analysis of Davis's Elements of Deductive Logic and of His Elements of Psychology* (1916), *A Manual of the Discipline of the Methodist Episcopal Church, South* (1920).

Diaz, Rafaelo. Tenor and member of the Metropolitan Opera Company from 1918 to 1936; died in New York City, Dec. 11, 1943; born in San Antonio, Tex., May 16, 1888.

Dickinson, Luren D(udley). Republican Governor of Michigan from Mar. 17, 1939, to Jan. 1, 1941; died in Charlotte, Mich., Apr. 22, 1943; born in Niagara Ct., N.Y., Apr. 15, 1859. Throughout his long public life Governor Dickinson constantly orated against sin, gambling, and "high living," and claimed that a "pipeline to God" guided him in his administration.

Dickinson, 1st Baron, of Painswick, Willoughby Hyett. British statesman and one of the originators of the League of Nations movement in 1915; died in Painswick, England, June 1, 1943; born Apr. 9, 1859. A Member of Parliament from 1906 to 1918, Lord Dickinson was chairman of the League of Nations Society, 1915-18; vice-president of the League of Nations Union in 1924, and president of the International Union of League of Nations Societies, 1925.

Ditter, J. William. Republican Congressman from Pennsylvania since 1933; died in the crash of a Navy transport plane into a hillside some 10 miles from Lancaster, Penn., Nov. 21, 1943; born in Philadelphia, Penn., Sept. 5, 1888.

Dixey, Henry E. Famous matinee idol of the 1880's and 1890's, who was best known for his performance in *Adonis* during 1884-86; died in Atlantic City, N.J., Feb. 25, 1943; born in Boston, Mass., Jan. 6, 1859.

Dobie, Charles Caldwell. Author of books delineating the color of an earlier San Francisco and its Chinatown, including *Blood-Red Dawn* (1920), *Broken to the Plow, Less Than Kin* (1926), *Portraits of a Courtesan* (1934); died in San Francisco, Calif., Jan. 11, 1943; born in San Francisco, Mar. 15, 1881. He also wrote numerous short stories.

Doret, Gustave. Swiss composer and conductor; died in Lausanne, Switzerland, Apr. 19, 1943; born in Aigle, Switzerland, Sept. 20, 1866.

Duff, Edward A(loysius). Roman Catholic Chief of Chaplains of the U.S. Navy from 1937 to 1939; died in Philadelphia, Feb. 11, 1943; born in Philadelphia, Jan. 5, 1885.

Duncan, Sir Patrick. British colonial administrator, Governor General of the Union of South Africa since 1937; died in Pretoria, U.S.A., July 17, 1943; born, Dec. 21, 1870.

Du Pont, Richard C(hichester). Noted glider expert and special assistant to Gen. Henry H. Arnold, chief of the Army Air Forces, in the air forces glider program (World War II) since April, 1943; died in a glider crash at March Field, Calif., Sept. 11, 1943; born in Wilmington, Del., Jan. 2, 1911. He had been president of All American Aviation, Inc., a company that served the U.S. Post Office Department in the transport of air mail and air express, since 1938.

Eastman, Lucius Root. President of Hills Bros. Company, food manufacturers of New York, during

1906-38 and chairman of the board thereafter; died in Scarsdale, N.Y., Mar. 14, 1943; born in Framingham, Mass., July 29, 1874.

Ely, Richard Theodore. Noted economist; died in Old Lyme, Conn., Oct. 4, 1943; born in Riply, N.Y., Apr. 13, 1854. Dr. Ely, whose liberal views inveighed against "iron laws," insisted that economic institutions suitable in one place might not jibe in another, and fought what he considered the excesses of unrestricted competition, held professorships at Johns Hopkins University (1881-92), University of Wisconsin (1892-1925), Northwestern University (1925-33), and was honorary associate in economics at Columbia University since 1937.

During his tenure at Johns Hopkins, Dr. Ely wrote *Labor Movement in America* (1886) and because of the views there expressed was charged with subversive ideas and the recall of his professorship; and in 1894 an unsuccessful attempt was made to depose him from his chair at Wisconsin for teaching Socialistic doctrines. He was one of the first professional economists to break with the nation that government interference in economic affairs is always an evil, and in his writings he frequently advocated state interference as a means of regulation. Dr. Ely was one of the principal founders of the American Economics Association (1885) and was president from 1899 to 1901.

His publications came to more than 50 volumes, including *French and German Socialism in Modern Times* (1883), *Introduction to Political Economy* (1889), *Studies in the Evolution of Industrial Society* (1903), *Elementary Economics* (with G. R. Wicker, 1904), *Ground Under Our Feet* (1938), *Land Economics* (with George S. Wehrwein, 1940).

Engel, Joseph W. Pioneer in the motion-picture industry and founder of the early Paramount and Metro-Goldwyn companies; died in New York City, Apr. 18, 1943; born in New York City, 1882.

Englebright, Harry Lane. Republican Congressman from California since 1926 and Republican whip in the House since 1933; died in Bethesda, Md., May 13, 1943; born in Nevada City, Calif., Jan. 2, 1884.

Engleman, J(ames) O(zro). President of Kent (O.) State University from 1928 to 1938 and thereafter professor emeritus of educational administration; died on a fishing trip on Lake Erie; born in Jeffersonville, Ind., Sept. 13, 1873.

English, Robert Henry. Rear admiral, U.S. Navy; commander of the Pacific submarine force; died in an airplane accident in California, Jan. 21, 1943.

Erb, Donald M(ilton). President of the University of Oregon since 1938 and associated with that institution from 1927; died in Eugene, Ore., Dec. 23, 1943; born in Brooklyn, N.Y., Aug. 3, 1900.

Evarista, Mother Mary (Anna Harks). President of Notre Dame College, South Euclid, Ohio, since 1922; she supervised the organization and founding of that institution; died in Cleveland, O., Aug. 1, 1943; born, 1868.

Ewing, James. Foremost authority on cancer and a pioneer in the treatment of the disease with radium; died in New York City, May 16, 1943; born in Pittsburgh, Penn., Dec. 25, 1866. Author: *Clinical Pathology of Blood* (1900-03), *Neoplastic Diseases* (1919-27).

Falconer, Sir Robert Alexander. Canadian educator and president of the University of Toronto from 1907 to 1932, thereafter president emeritus; died in Toronto, Ont., Canada, Nov. 4, 1943; born in Charlottetown, Prince Edward Island, Canada,

Feb. 10, 1867. Author: *The German Tragedy and Its Meaning for Canada* (1915), *The United States as a Neighbour* (1925), *Immortality and Western Civilization* (1930).

Farrell, James A(gustine). President of the United States Steel Corporation from 1911 to 1932; died in New York City, Mar. 28, 1943; born in New Haven, Conn., Feb. 15, 1863. He was a founder of the National Foreign Trade Council in 1914, and as such continuously advocated for foreign trade principles that would maintain world peace and break down the barriers of preferential trading systems.

Feist, Sigmund. German philologist and author of works represented in research libraries throughout the world; died in Copenhagen, Denmark, Apr. (?), 1943; born in Mainz, Germany, June 12, 1865.

Fenlon, John F. Provincial of the Society of St. Sulpice and president of the St. Mary's Seminary and University, Baltimore, since 1925; died in Holland, Mich., July 31, 1943; born in Chicago, June 23, 1873.

Fish, Bert. Minister to Egypt from 1933 to 1941 and to Portugal from Feb. 11, 1941; died in Lisbon, Portugal, July 21, 1943; born in Bedford, Ind., Oct. 8, 1875.

Fitzroy, Edward Algernon. British Speaker of the House of Commons since 1928 and Conservative Member of Parliament for Daventry during 1900-06 and since 1910; died in London, England, Mar. 3, 1943; born, July 24, 1869.

Fitzwilliam, 7th Earl of, William Charles de Meuron Wentworth-Fitzwilliam. British peer, soldier, political figure, and industrialist; died in Rotherham, Yorkshire, England, Feb. 15, 1943; born in Canada, 1872. Lord Fitzwilliam was one of the wealthiest persons in England, and was governing director of four companies with a value of \$14,000,000.

Focillon, Henri. French-American educator and world authority on medieval art and architecture; died in New Haven, Conn., Mar. 3, 1943; born in Dijon, France, Sept. 7, 1881.

Fontes, Antonio (Cardoso). Brazilian physician, noted for researches dealing with tuberculosis and tropical diseases; died in Rio de Janeiro, Brazil, Mar. 27, 1943; born in Petropolis, Brazil, Oct. 6, 1879.

Ford, Edsel (Bryant). Automobile manufacturer, president and treasurer (1921) of the Henry Ford Company, one of the most fabulous industrial empires of all time, since 1919; died in Detroit Mich., May 26, 1943; born in Detroit, Nov. 6, 1893. Identified from the beginning of his active career with his father, Henry Ford, in the manufacture of automobiles, he was considered not merely a collaborator but an originator. He was credited with the change from the famous model T "tin lizzie" to the Model A and subsequent development of the V-8 and Ford Lincoln Zephyr. An aviation enthusiast, he influenced his father toward his own air-mindedness, and when the United States made its entrance into World War II the Ford Company had already spent millions of dollars in preparation for mass plane production.

Fortoul, Jose Gil. Venezuelan public man, diplomat, and President of Venezuela during 1913-14; died in Caracas, Venezuela, June 15, 1943; born in El Tocuyo, Venezuela, 1862. He was the author of 30 novels and historic treatises, the best known of which was *The Constitutional History of Venezuela*.

Franco, Mello Afranio de. See MELLO FRANCO, AFRANCO DE.

Freeman, James E(dward). Episcopal Bishop of

Washington, D.C., since 1923, noted as the prime spirit behind the building of the National Cathedral in Washington which he hoped would be the American equivalent of Westminster Abbey; died in Washington, D.C., June 6, 1943; born in New York City, July 24, 1866.

Freeman, Richard Austin. British author of the "Dr. Thorndyke" detective novels and numerous other mystery stories, including *The Red Thumb Mark* (1907), *The Great Portrait Mystery* (1918), *The Puzzle Lock* (1925), *When Rogues Fall Out* (1932), *The Jacob Street Mystery* (1942); died in Gravesend, England, Sept. 30, 1943; born, 1862.

Fremantle, Sir Francis Edward. British surgeon, author, and a Conservative Member of Parliament for St. Albans since 1919; died in Hertfordshire, England, Aug. 26, 1943; born, 1872.

Fuqua, Stephen O(gden). Major general, U.S. Army (ret. 1938); died in New York City, May 11, 1943; born in Baton Rouge, La., Dec. 25, 1874. During World War I he rose to the rank of colonel, experiencing service as head of the First Army troop movement section, and as the First Division's chief of staff. In March, 1928, he was promoted to chief of infantry of the U.S. Army, assuming the temporary rank of major general. Upon completion of duty in the latter position in March, 1933, he was assigned to Spain as a military attaché, where he ended his military career. Since 1939 General Fuqua had been the land-military analyst for the magazine *Newsweek*, contributing a weekly column, "War Tides."

Gager, C(harles) Stuart. Botanist, director of the Brooklyn (New York) Botanic Garden since 1910; died in Waterville, Me., Aug. 9, 1943; born in Norwich, N.Y., Dec. 23, 1872. Author: *Errors in Science Teaching* (1901), *Fundamentals of Botany* (1916), *Laboratory Guide for General Botany* (1916), *The Relations between Science and Theology* (1925), *The Plant World* (1931).

Gainford, 1st Baron, of Headlam, Joseph Albert Pease. British coal mine owner, Liberal statesman, and expert on finance; died in Darlington, England, Feb. 15, 1943; born in Darlington, Jan. 17, 1860. Lord Gainford was chairman of the British Broadcasting Company from 1922 to 1926.

Galway, 8th Viscount, George Vere Arundell Monckton-Arundell. British Governor General of New Zealand from 1935 to 1941; died in London, Mar. 28, 1943; born, Mar. 24, 1832.

Gaselee, Sir Stephen. British librarian and keeper of the papers at the Foreign Office since 1920; died in London, England, June 15, 1943; born, Nov. 9, 1882. Author: *Stories from the Christian East* (1918), *Anthology of Medieval Latin* (1925), *The Language of Diplomacy* (1939).

Geenzier, Enrique. Panamanian journalist, diplomat, and public man; died in Colon, Panama, Sept. 21, 1943; born in Chitré, Panama, July 12, 1888. The poet laureate of Panama, his publications include *Salmo de vida* (1916), *La tristeza del vals* (1931), *Poesías* (1933).

Geer, Gerard de. Swedish geologist, professor of Geology at the University of Stockholm during 1897-1924, founder of the Geochronological Institute there, and author of numerous works on glacial and post-glacial problems; died in Stockholm, Sweden, August (?), 1943; born in Sweden, 1859.

Giannini, A(madeo) P(eter). Banker and motion-picture executive; died in Los Angeles, Calif., Feb. 7, 1943; born in San Jose, Calif., May 6, 1870.

Gillet, Louis. French art critic, noted for his numerous books on French and Italian art, including *Les primitifs français* (1904), *Watteau* (1921), *Histoire de l'art français* (1922), *L'art au nouveau*

monde (1929), *Londres et Rome* (1936), *Rayons et ombres de l'Allemagne* (1937); died in France, July (?), 1943; born, 1876. M. Gillet was elected to the French Academy in November, 1935.

Gillmore, Frank. Actor and co-founder (1913) of the Actors Equity Association and president of that union organization from 1929 to 1937; died in New York City, Mar. 29, 1943; born in New York City, May 14, 1867.

Glaser, Curt. German art historian and director of the State Art Library of Berlin Museums from 1924 to 1933; died in Lake Placid, N.Y., Nov. 23, 1943; born in Leipzig, Germany, 1879. A noted authority on Chinese and Japanese art, he was the author of numerous books on the subject, including *Die Kunst Ostasiens* (1913), *Die Graphik der Neuzeit* (1922).

Glyn, Mrs. Clayton (Elinor). British author of the little red-bound volume *Three Weeks* (1907) which created a sensation as the first so-called "sex novel"; died in London, England, Sept. 23, 1943; born in Jersey, the Channel Islands, Oct. 7, 1864. Although the novel was castigated by some ecclesiastical and lay authorities, but immensely popular elsewhere, she produced a novel called *It* in 1927, a word which became synonymous with sex appeal. Her other publications include *The Visits of Elizabeth* (1900), *The Vicissitudes of Evangeline* (1905), *The Philosophy of Love* (1921), *This Passion Called Love* (1926), *Love's Hour* (1932), *Adventure* (1936).

Grand, Sarah (Frances Elizabeth Clarke). British novelist, pioneer in the British votes-for-women movement, and six times (1923, 1925-29) Mayor of Bath; died in Calne, England, May 12, 1943; born in Ireland, 1854. Author: *Singularly Deluded; The Heavenly Twins* (1893); *The Beth Book* (1897); *The Modern Man and Maid* (1898); *Emotional Moments* (1908); *Variety* (1922).

Gray, George Kruger. British painter and designer, noted for his designs of seals, coins, and medals; died, May 4, 1943; born in Kensington, England, Dec. 25, 1880.

Grosvenor, Graham Bethune. Pioneer in air transportation and, at his death, special assistant to the president of Pan American Airways Corp.; died in New York City, Oct. 28, 1943; born in Dubuque, Ia., July 22, 1884. He was president of the Fairchild Airplane Manufacturing Corp. and vice-president of the Fairchild Aviation Corp. in 1928; and president of The Aviation Corp., 1929-30.

Guiterman, Arthur. Poet and playwright; died in Pittsburgh, Penn., Jan. 11, 1943; born in Vienna, Austria, Nov. 20, 1871. Author: *Betel Nuts* (1907), *Guest Book* (1908), *The Laughing Muse* (1915), *Ballads of Old New York* (1920), *A Poet's Proverbs* (1924), *Wildwood Fables* (1927), *Song and Laughter* (1929).

Hall, Radclyffe. British novelist and poet whose best-seller novel *The Well of Loneliness* (1928) was originally banned as obscene in England but later found recognition as a studious dissertation and a sociological and psychological study of sexual abnormality; died in London, England, Oct. 7, 1943; born in Bournemouth Hants, England, 1886. Other publications by Miss Hall include *The Forgotten Island; The Forge* (1924); *A Saturday Life* (1925); *Adams Breed* (1926); *The Master of the House* (1932); *The Sixth Beatitude* (1936).

Hall, Sir (William) Reginald. British admiral (ret. 1919), and head of the British Naval Intelligence Service in World War I from 1914 to 1918; died in London, England, Oct. 22, 1943; born, June 28, 1870. Sir Reginald was a Member of Parliament, 1919-23, 1925-29.

Hammerstein-Equord, Kurt von. German Commander in Chief of the German Army during 1930-33; died, Apr. 24, 1943; born, 1878. Fearless in voicing his anti-Nazi opinions, General Hammerstein-Equord was forced to resign his position when Hitler came into power.

Handelsmann, Marcell. Polish historian; murdered, according to reports from Poland, by German agents, September (?), 1943; born, 1882. Dr. Handelsmann had held professorial posts at Warsaw and Cracow universities, where he specialized in modern history. Later, he became a member of the Polish Academy of Science and president of the Polish Society for International Affairs. His publications include *Napoléon et la Pologne* (1909); *Historyka* (1928); *Czartoryski: Nicolas Ier et la question du Proche-Orient* (1934); *Czartoryski and the Ukrainian Question* (1938).

Hardinge, Hal W(illiams). Consulting engineer and inventor of the Hardinge conical mill for grinding ores (1906), the reverse air separator, the Telthermoscope and fire-damp detector for coal mines (1888), and numerous other devices; died in New York City, Sept. 15, 1943; born in San Antonio, Tex., Sept. 30, 1855.

Harrington, Gordon S(idney). Canadian Premier of Nova Scotia during 1930-33; died in Halifax, Nova Scotia, July 4, 1943; born in Halifax, Aug. 7, 1883.

Hart, Albert Bushnell. Historian, associated with Harvard University since 1883 and professor of the science of government from 1910 to 1926, thereafter professor emeritus; died in Boston, Mass., June 16, 1943; born in Clarksville, Penn., July 1, 1854. Dean of American historians, he was the author and editor of over 100 works dealing with American history, government, and foreign policy. He identified himself particularly with the introduction and development of the method of studying history from the original sources, both in secondary schools and in colleges, and his influence was felt throughout the United States.

Among his better-known books are *Formation of the Union* (1892), *Guide to the Study of American History* (1897), *Foundations of American Foreign Policy* (1901), *Essentials of American History* (1905), *Manual of American History, Diplomacy and Government* (1908), *New American History* (1917), *School History of the U.S.* (1917), and *We and Our History* (1923).

Included among the notable works that he edited are *American History Told by Contemporaries* (5 vols., 1898-1929); *American Citizen Series* (7 vols., since 1899); *The American Nation* (28 vols., 1903-18); *American Patriots and Statesmen* (5 vols., 1916), and *American Year Book* (1911-20, 1926-32).

Hart, Lorenz (Larry). Noted song writer; died in New York City, Nov. 22, 1943; born there, 1895. Since 1919 Hart had combined his lyrics with the music of Richard Rodgers in one of the most successful collaborations of the American stage. Hart and Rodgers produced an estimated 1,000 songs and more than 25 musical shows. They provided such song hits as *With a Song in My Heart*, *Isn't It Romantic?*, *Soon, It's Easy to Remember but So Hard to Forget*, *My Heart Stood Still*, *Small Hotel*, *Where or When*, *Blue Moon*, and *I Didn't Know What Time It Was*. They wrote music for such stage hits as *The Poor Little Ritz Girl*, *Dearest Enemy*, *On Your Toes*, *Babes in Arms*, *I'd Rather Be Right*, *I Married an Angel*, *The Boys from Syracuse*, and *Pal Joey*. Hart's last contribution was the 1943 stage revival of the Hart-Rodgers hit of 1927, *A Connecticut Yankee*.

Hartley, Marsden. Painter, whose marines and

landscapes won him international note; died in Ellsworth, Me.; Sept. 2, 1943; born in Lewiston, Me., 1878.

Hawkes, H(erbert) E(dwin). Dean of Columbia College, affiliate of Columbia University, since 1918; died in New York City, May 4, 1943; born in Templeton, Mass., Dec. 6, 1872. Author: *Advanced Algebra* (1912), *Plane Geometry* (1920), *College, What's the Use?* (1927).

Hayashi, Senjuro. Japanese Premier in 1937 and during World War II one of the most powerful of military leaders; died in Japan, Feb. 4, 1943; born, 1875. As War Minister during 1934-35, General Hayashi was responsible for the expansion and reorganization of the army along modern military lines.

Henry, Charles Arsène. French Ambassador to Japan since 1936; died in Tokyo, Japan, Nov. 14, 1943; born, 1881. In the French diplomatic service since 1906, he was Minister to Thailand, 1928-30; to Canada, 1930-34; and to Denmark, 1934-36.

Henrys, Paul Prosper. French major general, commander of the French armies on the eastern front in 1918 (World War I); died in Paris, France, Nov. 10, 1943; born in Neufchâteau, Vosges Province, France, Mar. 13, 1862.

Herriot, Édouard. French statesman; died, according to a German announcement, in a sanitarium near Paris, France, Oct. 17, 1943; born in Lyons, France, July 5, 1872. He was educated at the École Normale Supérieure, and at the conclusion of his studies became a professor of rhetoric and literature at the Lycee of Lyons, and an instructor at the university there. He entered politics and was successively counselor general of the Rhone Department, Mayor of Lyons (since 1905), Senator (1912), Minister of Public Works in Briand's government (December, 1916, to March, 1917), and deputy (1919-40).

After the armistice of World War I, he opposed the reparation policies of the Nationalist groups in France and favored a rapprochement with Germany and Russia. He was president of the Federation of Radical and Radical Socialist parties, and was one of the leaders of the Parliamentary opposition to the *bloc national*. The elections of May, 1924, led to his premiership, supported by parties of the left bloc, from June of that year to April of the following. His policy was conciliatory toward Germany, putting into effect the Dawes plan. He stood strongly against inflation, so when it was discovered that the Government had surreptitiously resorted to it, the ministry was forced to resign. Painlevé, the President of the Chamber, became Premier, and Herriot was chosen President in his place; on July 20, 1926, he left the speaker's chair to overthrow the Briand-Caillaux government. However, the attempt proved abortive as his cabinet was defeated on its first appearance before the Chamber. (Actually, he was Premier for one day.) Herriot then became Minister of Public Instruction in the Poincaré government (1926-28).

From June through December, 1932, Herriot was again Premier. With the fall of his ministry, he assumed the Cabinet rank of Minister of State in the Doumergue and Flandin Cabinets, 1934-36; and was President of the Chamber of Deputies, 1936-40.

With the fall of France to Germany in June, 1940, he devoted his full energy to maintaining resistance against the Nazis and their French adherents. As President of the Chamber he led that body in taking a defiant stand against the totalitarian Vichy constitution. In 1941, after the Chamber had been suspended by the government by

Marshal Pétain, he led a rump parliament that met in Vichy in overt opposition to the government. In 1942 he published a statement warning the Pétain government against forcing France into a war with "our allies," England and the United States. On Oct. 2, 1942, he was arrested because of his failure to leave France, and on Sept. 7, 1943, was committed to the sanitarium, where he apparently died.

As a man of letters, Herriot was noted for his works on political economy, literature, and musical subjects: *Philon le Juif* (1897), *Précis d'histoire des lettres françaises* (1905), *La Russie Nouvelle* (1922), *Sous l'Olivier* (1930), *Bethoven* (1932), *La France dans le Monde* (1933), *Orient* (1934). Among his essays was *The Wellsprings of Liberty* (1940).

Herzog, Rudolph. German author, noted for his prolific writings, including the novels *Der Graf von Gleichen* (1901), *Die Wiskottens* (1905), *Die Burgkinder* (1911); died, Feb. 4, 1943; born in Barmen, Germany, Dec. 6, 1869. In addition to his novels he wrote many poems, critical essays, and dramas.

Heward, Leslie Hays. British musician and composer; died in Birmingham, England, May 3, 1943; born in Liversedge, Yorkshire, England, Dec. 8, 1897.

Hewart, 1st Viscount of Bury, Gordon. British Lord Chief Justice from 1922 to 1940; died in Totteridge, Hertfordshire, England, May 5, 1943; born in Bury, England, Jan. 7, 1870. A Liberal Member of Parliament during 1913-22, he was appointed Solicitor General (1916-19) in Lloyd George's coalition government. Admitted to the Cabinet (1921-22), he gave material assistance in reconstruction legislation. Author: *The New Despotism; Essays and Observations* (1930); *Not Without Prejudice* (1937).

Hill, A(lbert) Ross. President of the University of Missouri from 1908 to 1921; died in Kansas City, Mo., May 6, 1943; born in Nova Scotia, Canada, Oct. 4, 1869.

Hinsley, Arthur. British Archbishop of Westminster and head of the Catholic Church in England since 1935; died in Buntingford, Hertfordshire, England, Mar. 17, 1943; born in Carleton, Yorkshire, England, Aug. 25, 1865. Created a Cardinal in 1937, he was the first English prelate to win the red hat in 27 years. During World War II he founded the Sword of the Spirit movement to "return to the principles of international order and Christian freedom" after peace has been achieved.

Hiraga, Yuzuru. Japanese educator and naval officer; died, Feb. 17, 1943; born in Hiroshima-ken, Japan, Mar. 8, 1878. Vice-Admiral Hiraga was the designer of many major Japanese warships. In 1939 he was appointed president of the Tokyo Imperial University.

Hirst, 1st Baron, of Witton, Hugo Hirst. British founder and chairman of the General Electric Company, Ltd. since 1910, and president of the Radio Manufacturers Association; died in Reading, England, Jan. 22, 1943; born, Nov. 26, 1863.

Hogan, Aloysius (Gonzaga) J(oseph). President of Fordham University from 1930 to 1936 and dean of the Graduate School of Georgetown University (Washington, D.C.) since June, 1936; died in Washington, D.C., Dec. 17, 1943; born in Philadelphia, Aug. 5, 1891.

Horwood, Sir William (Thomas Francis). British Commissioner of Metropolitan Police and chief of Scotland Yard from 1920 to 1928; died in West Mersea, Essex, England, Nov. 16, 1943; born, November, 1868. As provost marshal of the British Expedi-

tionary Force, in World War I, Sir William attained the rank of brigadier general.

Hovey, George Rice. President of Virginia Union University, Richmond, from 1905 to 1919; died in Upper Montclair, N.J., Jan. 28, 1943; born in Newton Centre, Mass., Jan. 17, 1860. Author: *Hebrew Word Book* (1902), *The Bible—Its Origin and Interpretation* (1930), *Christian Ethics for Daily Life* (1932).

Howard, Leslie. British actor, motion-picture director and producer; died as a passenger aboard a British transport plane which plunged into the Bay of Biscay as a result of being attacked by an enemy plane (World War II), June 1, 1943; born in London, England, April, 1893. After being mustered out of the British Army in World War I, he turned to acting and toured England in *Peg o' My Heart* and *Charley's Aunt*, then made his London debut in *The Freaks* in 1918. He came to the United States in 1920 and subsequently appeared in numerous Broadway hits, including *Aren't We All* (1924), *Outward Bound* (1924), and *The Green Hat* (1925).

In 1930 he commenced his motion-picture career. He was an immediate success and appeared in such notable films as *Smilin' Through*, *Of Human Bondage*, *The Petrified Forest*, *Pygmalion*, *Gone With the Wind*, and *Intermezzo*.

With the outbreak of World War II (1939), Howard devoted his services to the British Ministry of Information, for which he wrote and directed propaganda films and gave weekly radio broadcasts. In April, 1943, he undertook an extensive lecture tour of Spain and Portugal for the British Council, and it was on this mission that death came.

Hrdlička, Aleš. World-distinguished anthropologist and curator of the division of physical anthropology, United States National Museum, since 1910; born in Humpolec, Bohemia, Mar. 29, 1869. After a preliminary education in Bohemia, he emigrated to the United States and took up studies in New York City at the Eclecti, Homoeopathic and Allopathic colleges, graduating in medicine in 1892 and 1894. His work led him to special studies of the insane and other defective classes, from which he became interested in physical anthropology. During 1896-99 he was associate in anthropology at the New York State Pathological Institute.

From 1899 to 1903 Dr. Hrdlička was director of physical anthropology in the Hyde expedition to Mexico and the southwestern United States. He accompanied anthropological expeditions to various parts of the United States, Mexico, Peru, South America, Egypt, the Balkans, Europe, Siberia, Russia, Mongolia, etc. He was appointed assistant curator of physical anthropology at the United States National Museum in 1903, becoming curator in 1910.

His almost 50 years devoted to the study of the origins and development of mankind convinced Dr. Hrdlička that the North American Indian is of Asiatic origin, proving the contention by much research work in the Aleutian Islands, reporting his findings in hundreds of articles: that the cradle of man's development was not in Asia but in Europe; and that man sprang not from some anthropoid ape, as Darwin postulated, but from some vanished creature more human. Dr. Hrdlička was vitally interested in an "Old American type," persons whose families ran back more than three generations, studying countless groups to prove that "an American type of man and woman has been developing appreciably," and that he is tall, frank, and jovial, and follows "the basic concep-

tion of 'Uncle Sam' and the 'Gibson girls.'" However, Dr. Hrdlička maintained that the "Old American type" could not remain static and was changing into a new American type.

A member of various distinguished American and foreign scientific societies, Dr. Hrdlička wrote exhaustively on his subject, including *The Eskimo Brain* (1901), *Ancient Man in North America* (1907), *Ancient Man in South America* (1912), *Anthropological Work in Peru* (1914), *The Old White American* (1917), *Physical Anthropology* (1919), *Anthropometry* (1920), *Anthropology of Florida* (1922), *The Old Americans* (1925), and his diary of his years in Alaska, published a few months before his death. He was the founder (1918) and editor of the *American Journal of Physical Anthropology* thereafter. He was a Contributing Editor to *The New International Year Book* in 1940 and 1941.

Ingram, William (Navy Bill). Noted Navy football player and coach; died in Los Gatos, Calif., June 2, 1943; born in Jeffersonville, Ind., 1896. A major in the procurement branch of the U.S. Marine Corps since January, 1943, he was head football coach at the University of Indiana during 1923-25, returning to his alma mater, Annapolis Naval Academy, in 1926 to coach his teams to 32 wins, 13 losses and four ties during five seasons there. He coached at the University of California from 1931 to 1935, retiring in the latter year.

Isham, Norman Morrison. Architect, who pioneered in the field of accurate studies of early housing of English colonies of America; died in Wickford, R.I., Jan. 1, 1943; born in Hartford, Conn., Nov. 12, 1864. Author: *Early Rhode Island Houses*, with Albert F. Brown (1895); *Early American Houses* (1928); *Praise of Antiquaries* (1931); *Glossary of Colonial Architecture*.

Jacobs, W(illiam) W(ymark). British author of stories about seafaring men, including *Many Cargoes* (1896), *The Skipper's Wooing* (1897), *A Master of Craft* (1900), *Captains All* (1905), *Night Watches* (1914), *Deep Waters* (1919), *Sea Whispers* (1926); died in London, England, Sept. 1, 1943; born in London, Sept. 8, 1863. He was also noted for his horror tales, particularly *The Monkey's Paw*.

Jaquith, Harold C(larence). President of Illinois College, Jacksonville, from 1933 to 1937; died in West Hartford, Conn., Apr. 20, 1943; born in Nashua, N.H., May 25, 1888.

Jespersen, Otto. Danish philologist and professor of English at the University of Copenhagen, Denmark, from 1893 to 1925; died in Roskilde, Denmark, Apr. 30, 1943; born in Randers, Denmark, July 16, 1860. Author: *Growth and Structure of the English Language* (1905), *Modern English Grammar* (5 vols., 1909-40), *Philosophy of Grammar* (1924), *Efficiency in Linguistic Change* (1941).

Jesschonnek, Hans. German colonel general and chief of staff of the German Air Force since 1939, according to German reports, although no announcement of the appointment was made until December, 1942; died at the headquarters of Reichsmarshal Hermann Goering, Aug. 20 (?), 1943; born, 1899.

Johnson, Paul B(urney). Governor of Mississippi from 1939 to Dec. 26, 1943 (his term of office expired on Jan. 17, 1944), and Democratic Congressman from Mississippi during 1919-23; died in Hattiesburg, Miss., Dec. 26, 1943; born in Hillsboro, Scott Co., Miss., Mar. 23, 1880.

Jones, Sir Robert Armstrong. British surgeon and authority on diseases of the brain; died in Carnarvon, Wales, Jan. 30, 1943; born, Dec. 2, 1857.

Jules-Bois, H. A. French author and psychologist, noted for his theory of the "superconscious" mind, opposing Sigmund Freud's subconscious; died in New York City, July 2, 1943; born in Marseilles, France, 1869. Dr. Jules-Bois was the author of some 40 books based on his travels to India, Egypt, Greece, Crete, and the United States. In addition, he was a much discussed poet and playwright.

Kellas, Eliza. Co-founder (1916) and president of Russell Sage College, New York, from 1916 to 1928; died in Troy, N.Y., Apr. 10, 1943; born in Mooers, N.Y.

Kellogg, John Harvey. Surgeon, health authority, originator of corn flakes, and founder of the food business which later became the W. K. Kellogg Company; died in Battle Creek, Mich., Dec. 14, 1943; born in Tyrone, Mich., Feb. 26, 1852. A crusader for "biologic Living"—meaning no meat in the diet, renunciation of tobacco, coffee, tea, and spices and use of foods derived from grains and fruits—he became superintendent of the Battle Creek Sanitarium in 1876 and developed that institution to an unprecedented degree, remaining as its head until his death. Soon after Dr. Kellogg became head of the Sanitarium he inaugurated the manufacture of breakfast foods, gaining recognition as the originator of health foods and coffee and tea substitutes.

In addition to his discoveries of health foods, Dr. Kellogg was a noted surgeon and inventor of medical devices, including the electric light bath. He discovered the sinusoidal current and the therapeutic value of the electric light. He was the author of many publications, including *Plain Facts* (1877), *Home Book of Modern Medicine* (1880), *The Stomach* (1896), *Health Question Box* (1917), *Autointoxication* (1918), *Tobaccoism* (1922), *How to Have Good Health* (1933).

Kelly, Howard Atwood. Surgeon, gynecologist and roentgenologist; died in Baltimore, Md., Jan. 12, 1943; born in Camden, N.J., Feb. 20, 1858. Dr. Kelly was educated at the University of Pennsylvania, where he graduated B.A. in 1877 and M.D. in 1882, and where he was associate professor of obstetrics in 1888–89. While in Philadelphia, he founded Kensington Hospital. During 1889 he joined the faculty of the newly organized medical school of Johns Hopkins University as professor of gynecology and obstetrics, serving as such until 1899, after which he was professor of gynecology, retiring in 1919 as professor emeritus. At Johns Hopkins Hospital he was gynecological surgeon, 1899–1919, and thereafter consulting gynecologist. With Sir William Osler, and Doctors Halstead and Welch he helped to make the Medical School of Johns Hopkins University the first great medical school in the United States and one of the foremost in the world.

Dr. Kelly blazed trails in gynecology, obstetrics, and abdominal surgery. In 1888 he devised the open cystoscope by which a light is introduced into the interior of the body to aid in diagnosis and operations, and he is credited with having been the first in the United States to use radium for the treatment of cancer.

In addition to contributing some 500 articles to medical journals, he was the author of numerous medical books, including *Operative Gynecology* (2 vols., 1898, 1906), *The Vermiform Appendix and its Diseases* (1905), *Medical Gynecology* (1908), *American Medical Botanists* (1913), *A Scientific Man and the Bible* (1925), *Gynecology* (1928).

Kent, R(aymond) A(sa). President of the University of Louisville, Kentucky, since 1929; died in Louis-

ville, Feb. 26, 1943; born in Plymouth, Ia., July 21, 1883.

Keppel, Frederick Paul. Dean of Columbia College during 1910–18 and president of the Carnegie Corporation of New York from 1923 to 1941; died in New York City, Sept. 8, 1943; born on Staten Island, N.Y., July 2, 1875. As head of the Carnegie Corporation, a corporation functioning for the advancement and diffusion of knowledge and understanding among the peoples of the United States, he disbursed millions of dollars in scientific, educational, and humanitarian projects. Since his retirement from the Corporation, he had been serving with the State Department in Washington as a member of the Board of Appeals on Alien Cases.

After graduating from Columbia University in 1898, he joined the faculty of that institution in 1900 as assistant secretary; in 1902–10 he served as secretary, becoming dean of the College in the latter year. With the entry of the United States into World War I he resigned his position (1918) to enter the War Department as Third Assistant Secretary of War. In this post he had charge of the life of the soldiers in all nonmilitary aspects. With the signing of the armistice he became director of all foreign operations of the American Red Cross (1919–20), and from 1920 to 1922 was the first commissioner for the United States International Chamber of Commerce in Paris.

His publications include: *Columbia University* (1913), *Undergraduate and His College* (1917), *Some War Time Lessons* (1920), *Education for Adults* (1926), *The Foundation* (1930), *The Arts in American Life* (with R. L. Duffus, 1933).

Kharitonoff, Fedor Mikhailovich. Russian lieutenant general; died May 27, 1943; born, 1898. General Kharitonoff was credited with the counter-offensive (World War II) against the Germans at Rostov, Russia, in November, 1941, which marked the beginning of the German retreat on the Eastern Front.

Kingsbury, Albert. Mechanical engineer, founder (1918) and president of the Kingsbury Machine Works, Philadelphia; died in Greenwich, Conn., July 28, 1943; born near Morris, Ill., Dec. 23, 1863. He was the inventor of the Kingsbury thrust bearing used on most American warships.

Kinnick, Nile C. Jr. All-American halfback on the University of Iowa football team in 1939 and named athlete of that year; killed in action when his plane made a forced landing at sea (World War II), June 2, 1943; born at Adel, Ia., 1918.

Kisch, Frederick Hermann. British army officer and Zionist leader; died in action in Tunisia, Apr. 11, 1943; born in August, 1888. Brigadier Kisch, as Chief Engineer of the British Eighth Army, had been responsible for the North African fortifications at El Alamein and had administered the engineering program that enabled the swift British advance to Tripoli in World War II.

Knight, Eric. British-American novelist, who wrote *Song on Your Bugles* (1936), *The Flying Yorkshireman* (1938), *You Play the Black and the Red Comes Up* (1940), *Now Pray We for Our Country* (1940), *This Above All* (1941), *Lassie Come Home* (1942), *Sam Small Flies Again* (1942); died on active duty in World War II as a major in the U.S. Army in an airplane accident at Paramaribo, Surinam; born in Menston, Yorkshire, England, Apr. 10, 1897.

Koga, Mineichi. Japanese admiral and Commander in Chief of the Japanese Fleet since the death of Admiral Yamamoto in April, 1943; died, according to the Chinese News Agency, during an Allied

bombing of his flagship in the Southwest Pacific (World War II), July, 1943; born, 1885.

Ladd, George Tallman. Mechanical engineer, industrialist, and president and general manager of the United Engineering and Foundry Company, Pittsburgh, since 1928; died in Pittsburgh, Penn., Oct. 3, 1943; born in Edinburgh, O., May 17, 1871.

La Fontaine, Henri. Belgian jurist and world peace advocate; died in Brussels, Belgium, May 26, 1943; born in Brussels, 1854. After studying law at the University of Brussels, he became a member of the International Peace Bureau in 1882 and was president of the Bureau from 1907. He became a professor of law at the University of Brussels in 1893 and a Senator of Belgium in 1895. Professor La Fontaine helped to organize the Hague Peace Conferences of 1899 and 1907, and as a result of his work for international peace was awarded the Nobel Peace Prize for 1913. After World War I he strove to lay the foundation for a strong League of Nations. He was the author of *Les droits et les obligations des entrepreneurs des travaux publics* (1885); *Traité de la contrefaçon* (1888); *Pasicrisie internationale* (1902); *Bibliographie de la paix et de l'arbitrage* (1904).

Landsteiner, Karl. Austrian-American authority on immunology, bacteriology, and pathology; died in New York City, June 26, 1943; born in Vienna, Austria, June 14, 1868. Graduated from the University of Vienna with the degree of M.D. in 1891, he turned to research on bacteriological and pathological problems. In 1900 he began the study of blood phenomena and in 1901 showed that human blood was of different types. During 1909-19 he taught pathology at the University of Vienna. In 1922 he came to the United States as a member of the Rockefeller Institute for Medical Research, where he continued as such until his retirement in 1939, thereafter emeritus.

The studies of Dr. Landsteiner brought immunity from the dangers of blood transfusion; he found that blood could be classified into four main groups and that transfusion could only be successful when blood donor and recipient belonged to the same blood-type group. Since 1914 his research work had been mainly on the chemical nature of the substances and processes controlling immunity, and as a result threw new light on how man resists infectious disease. His studies in the field of serology changed it to an important branch of chemistry by showing that the underlying causes of a variety of human ills were chemical. His discoveries brought him the Nobel Prize for 1930.

He contributed papers on immunology, bacteriology, and pathology, especially: *Chemistry of Antigens*; *Human Blood Groups*; *Etiology of Poliomyelitis*; *Etiology of Paroxysmal Hemoglobinuria*, *Studies of Syphilis*.

Lane, Sir (William) Arbuthnot. British surgeon and authority on fractures; died in London, England, Jan. 16, 1943; born at Fort George, Scotland, July 4, 1856.

La Puma, Vincenzo. Italian Roman Catholic Cardinal, titular archbishop of San Cosmos and Damian; died in Rome, Italy, Nov. 4, 1943; born in Palermo, Italy, Jan. 22, 1874.

Lenygon, Francis Henry. Authority on English interior decoration and furniture who had decorated Buckingham and Windsor Palaces and was a consultant in the restoration of Colonial Williamsburg, Va.; died in New York City, June 12, 1943; born in Lincoln, England, May 11, 1877.

Leonard, Adna Wright. Methodist Bishop of Washington, D.C., since 1939; died in an airplane accident in Iceland, May 3, 1943, on the first lap of

a mission as chairman of the General Commission of U.S. Army and Navy Chaplains (World War II), that had the twofold purpose of "letting the Protestant chaplains and service men overseas know that the churches at home are not forgetting them, and obtaining a first-hand picture of religious life among men under fire, in order that the churches may better serve these men"; born in Cincinnati, O., Nov. 2, 1874. Ordained in 1899, Bishop Leonard was the author of numerous works, including *The Shepherd King*, *The Roman Catholic Church at the Fountain Head*, *Evangelism in the Remaking of the World*, *Hearthstone League Book of Remembrance*, *Decisive Days in Social and Religious Progress*.

Lewis W(inford) Lee. Inventor of the poison gas, Lewisite, known as the deadliest of all war gases, and head of the department of chemistry at Northwestern University during 1919-24; died in Evanston, Ill., Jan. 20, 1943; born in Gridley, Calif., May 29, 1878.

Lindsey, Ben(jamin) B(arr). Jurist and social reformer; died in Los Angeles, Calif., Mar. 26, 1943; born in Jackson, Tenn., Nov. 25, 1869. In 1894 he entered upon the practice of law in Denver, Colorado and subsequently in 1900 he was appointed to a vacancy in the county court. His special preoccupation came to be the reform of the methods of dealing with children charged with delinquency. Through his efforts the juvenile court system was founded, which since has been copied throughout the world. In 1901 he was made judge of the Juvenile Court of Denver, serving as such until 1927.

Among other measures to which Judge Lindsey contributed his influence were a reform of the ballot; State provision for the support of the dependents of persons serving in prison; extension of the probation system for prisoners; and the organization of public baths and playgrounds in Denver. He carried on an active propaganda for the general adoption of the juvenile-court plan, and for political and social reform, through lectures delivered in the United States and Europe.

Author: *Problems of the Children*; *The Beast and the Jungle* (1910); *The Doughboy's Religion* (1919); *The House of Human Welfare*; *The Companionate Marriage* (1927); *The Dangerous Life* (autobiography, 1931).

Lin Sen. President of China since Dec. 15, 1931; died in Chungking, China, Aug. 1, 1943; born in Foochow, Fukien, China, 1864. During his youth Lin Sen became a member of the Kuomintang, a secret society agitating the overthrow of the Manchu dynasty and the inauguration of a republic. When this aim was achieved in 1911, Lin Sen was elected to the Senate of the first Parliament in 1912, holding that post until 1923. In 1924 he was elected a member of the Central Executive Committee of the Kuomintang, now the governing party in China. In 1928 he became vice-president of the legislative Yuan, subsequently succeeding to the presidency.

Through his years as titular head of China, Lin Sen had comparatively little power or influence on the course of events, but he filled what was a ceremonial position with wisdom, honor, and reverence, serving as the symbol of national unity which was so sorely needed during the Japanese incursions.

Livingstone, Colin Hamilton. Financier and an organizer and president of the Boy Scouts of America during 1910-25; died in Fishersville, Va., Feb. 1, 1943; born in St. John, New Brunswick, Canada, June 3, 1863.

Loftus, Marie Cecilia (Cissie). Outstanding figure in

the theatrical world since 1893 and one of the greatest mimics ever to appear on the British and American stage; died in New York City, June 12, 1943; born in Glasgow, Scotland, Oct. 22, 1876.

Love, Montagu. British-American stage and screen actor; died in Beverly Hills, Calif., May 17, 1943; born in Portsmouth, England, 1877. Entering the motion-picture field in 1916, he subsequently appeared in such noted films as the "silent" *Rasputin the Black Monk*; *Lloyd's of London*; *The Prince and the Pauper*; *The Prisoner of Zenda*; *Dr. Ehrlich's Magic Bullet*; and *Tennessee Johnson*.

Lowden, Frank O(rren). Republican Governor of Illinois during 1917-21 and candidate for the Republican Presidential nomination in 1920 and again, 1924; died in Tucson, Ariz., Mar. 20, 1943; born in Sunrise City, Minn., Jan. 26, 1861. He was a member of the U.S. House of Representatives from 1906 to 1911. As governor he reorganized State and municipal pension systems and helped develop the present inland waterway system from Chicago to the Gulf of Mexico.

Lowell, A(bbott) Lawrence. President of Harvard University from 1909 to 1933, and authority on government; died in Boston, Mass., Jan. 6, 1943; born in Boston, Dec. 13, 1856. Graduated from Harvard in 1877 and from the Harvard Law School in 1880, he practiced his profession in Boston until 1897. After that date he was connected with Harvard, as lecturer on government (1897-99); professor of the science of government (1900-09); and president of the university, succeeding Charles W. Eliot.

The administration of President Lowell was marked by expansion of the university; by thorough reorganization of the financial set-up; by encouragement of research on the part of the faculty, and by interest in the social life of the students and hence the establishment of the "house plan," a college within a college, where student and tutors might live together. President Lowell succeeded his father as trustee of the Lowell Institute of Boston in 1900, served as president of the American Political Science association in 1909, was president of the League to Enforce Peace and later was a strong supporter of the League of Nations.

An international authority on the history and science of government, his publications include *Essays on Government* (1889), *Governments and Parties in Continental Europe* (1896), *The Influence of Party Upon Legislation in England and America* (1902), *Public Opinion in War and Peace* (1923), *At War with Academic Traditions* (1934), and *What a College President Has Learned* (1938).

Luckenbach, Edgar (Frederick). President of the Luckenbach Steamship Company, Inc., operator of freighters, since 1913; died in Sands Point, N.Y., Apr. 26, 1943; born in Kingston, N.Y., 1868.

Lutz, Frank E(ugene). Entomologist, chairman and curator of the Department of Insects and Spiders of the American Museum of Natural History since 1921; died in New York City, Nov. 27, 1943; born in Bloomsburg, Penn., Sept. 15, 1879. As a scientist and educator Dr. Lutz was particularly noted for his research work in biology and insect physiology and for his popularizing of entomology and nature study. In 1917 he published the *Field Book of Insects*, which in succeeding editions became the standard work for all entomological students. His other book, *A Lot of Insects* (1941), was written especially for the nonstudent.

McAdie, Alexander G(eorge). Noted meteorologist, professor of meteorology at Harvard University and head of the Blue Hill Observatory of the university from 1913 to 1931, thereafter professor emeritus;

died in Hampton, Va., Nov. 1, 1943; born in New York City, Aug. 4, 1863. Author: *Principles of Aerography*; *Cloud Atlas*; *Making the Weather*; *War Weather Vignettes*; *Man and Weather*.

McCarrens, John S. Newspaperman, general manager of *The Cleveland Plain Dealer* since 1933 and president of the American Newspaper Publishers Association during 1939-40; died by assassination in Cleveland, O., July 24, 1943; born in Freeport, Penn., July 27, 1869.

McCarthy, Joseph. Writer of lyrics for many popular songs, including *Irene*, *Alice Blue Gown*, *I'm Always Chasing Rainbows*, *Rio Rita*, and *You Made Me Love You*; died in New York City, Dec. 18, 1943; born in Malden, Mass., 1885.

McIntyre, Marvin H(unter). Secretary to President Roosevelt since 1933; died in Washington, D.C., Dec. 13, 1943; born in LaGrange, Ky., Nov. 27, 1878.

Mack, Julian William. Judge of the U.S. Circuit Court of Appeals from 1911 to September, 1941, and prominent figure in world Jewry; died in New York City, Sept. 5, 1943; born in San Francisco, Calif., July 19, 1866. Judge Mack was president of the first American Jewish Congress in 1918-19 and was head of the Zionist Organization of America from 1918 to 1921.

Mackay, Ernest John Henry. British archeologist and writer; died at Monks Risborough, Bucks, England, Oct. 5, 1943; born, July 5, 1880.

McKenna, Reginald. British statesman and financier; died in London, England, Sept. 6, 1943; born in London, July 6, 1863. He was educated at Kings College, London, and Trinity Hall, Cambridge, where he was a scholar, took honors in mathematics, and gained distinction as an oarsman, rowing in the university boat race in 1887. In the latter year he became a barrister and practiced his profession until 1895, when he was elected to the House of Commons from Monmouthshire (1895-1918). A member of the Liberal opposition, he failed to attract attention until the return of his party to power in 1905. He then obtained Cabinet rank as Financial Secretary to the Treasury (1905-07). In 1907 he rose to the presidency of the Board of Education, and introduced the unsuccessful "contracting-out" bill of 1908 which failed to become legislation.

From that latter year until October, 1911, he was First Lord of the Admiralty. And as such, at a period when England was disturbed over the rapid increase of the German fleet, strongly advocated the building up of the British fleet and maintaining a safe margin of superiority over potential enemy powers. In 1911-15 he was Home Secretary and in that position was prominent in the movement for Welsh disestablishment, introducing the bill of 1912. In the first Coalition ministry in 1915 he was made Chancellor of the Exchequer (1915-16) and during those two years was the chief financial officer of the British Government. He introduced a new war loan and brought in the budget of September, 1915, which was recognized as an able attempt to deal with the financial conditions arising out of World War I. He retired from politics to assume chairmanship of the Midland Bank, one of the largest banks in the world, in 1919, and maintained that position thereafter. His only publication was *Post-War Banking Policy* (1928).

McLaren, John. Horticulturist, who built the famous Golden Gate Park in San Francisco; died in San Francisco, Calif., Jan. 12, 1943; born in Scotland, 1846.

Macleay, Sir (James William) Ronald. British Minister to China in 1922-26, to Czechoslovakia in

1927-29, and Ambassador to Argentina, 1930-33; died in Hertford, England, Mar. 5, 1943; born, 1870.

Mnabb, Vincent. British Roman Catholic ecclesiastic, essayist, and polemic; died in London, England, June 17, 1943; born in Portaferry, County Down, Ireland, 1867.

Madjaroff, Rashko. Bulgarian lawyer and politician; died in Sofia, Bulgaria, Oct. (?), 1943; born, 1874. Dr. Madjaroff has served as Minister of Agriculture (1918), of Justice (1924), of Railways, Posts, and Telegraphs (1924-25, 1928-31).

Madsen-Mygdal, Thomas. Danish Premier and Minister of Agriculture from 1926 to 1929; died in Copenhagen, Denmark, Feb. 23, 1943; born in Mygdal, Denmark, 1876.

Magee, John Benjamin. President of Cornell College, Iowa, since 1939; died in Excelsior Springs, Mo., Apr. 6, 1943; born in Albion, Ia., July 19, 1887. Dr. Magee was ordained a minister in the Methodist Church in 1910.

Makowski, Wacław. Polish jurist and statesman, elected president of the Constitution Board of Sejm (House of Representatives) in 1928; died in Rumania, Feb. 16, 1943; born, 1880.

Mandel, Georges. French politician, member of numerous Cabinets, and chief of cabinet to Clemenceau during World War I (1916); died, according to unconfirmed reports, in a German prison camp where he had been retained since the fall of 1942, June (?), 1943; born in Paris, France, 1885.

Mapes, Victor. Playwright, producer, and drama critic; died in Cannes, France, Sept. 27, 1943; born in New York City, Mar. 10, 1870. The stage manager of Daniel Frohman's Lyceum Theater in New York in 1897, he was the author of *Duse and the French* (1897), *Partners Three* (1909), and *Gilded Way* (1911). His plays include *La Comtesse de Lisne* (1895), *Capt. Barrington* (1903), *The Boomerang* (with Winchell Smith, 1915), *The Lassoo* (1917), *The Hottentot* (1919), *The Amethyst* (1925).

Marett, Robert R(anulph). British anthropologist and rector of Exeter College, Oxford, since 1928; died in Oxford, England, Feb. 18, 1943; born on the island of Jersey, June 13, 1866. Author: *Anthropology* (1912), *Psychology and Folklore* (1920), *Man in the Making* (1928), *Head, Heart and Hands in Human Evolution* (1935).

Marin, Francisco Rodriguez. See SPANISH LITERATURE.

Marmon, Howard C. Pioneer in the development of racing cars and designer of the first Marmon automobile (1902); died at Fort Lauderdale, Fla., Apr. 4, 1943; born in Richmond, Ind., 1876.

Marquis, Albert N. Founder of *Who's Who in America*; died in Evanston, Ill., Dec. 21, 1943; born in Brown County, O., Jan. 10, 1855. In 1899 he issued the first volume of *Who's Who*, which contained 8,602 sketches and was similar in both format and the nature of its contents to the 21 volumes that have succeeded it. He was the sole owner of the book until 1926 when the company was incorporated, and he then served as president during 1926-37. He acted as editor-in-chief of *Who's Who* from the founding until 1940, retiring as editor emeritus. The 22 and latest edition of the volume, 1942-43, contained some 31,692 sketches and sold over 60,000 copies, the standard reference for famous people in the United States. He also published *Who's Who in Chicago*, *Who's Who in New England*, *Who's Who in Pennsylvania*, and other regional biographical books.

Marshall, Tully. Veteran stage and screen character actor who appeared in 250 plays and more than

50 films; died in Hollywood, Calif., Mar. 10, 1943; born in Nevada City, Calif., Apr. 13, 1864.

Martin, Lillian Jane. Internationally recognized psychologist and pioneer in the rehabilitation of the aged and founder of the first child-guidance clinic in the United States; died in San Francisco, Calif., Mar. 26, 1943; born in Olean, N.Y., July 7, 1851. Associated with Stanford University from 1899 and professor of psychology during 1911-16, thereafter professor emeritus, Dr. Martin was the author of various works, including *Personality as Revealed by the Content of Images* (1917), *Mental Training of the Pre-School Age Child* (1923), *Salvaging Old Age* (1930), *The Home in a Democracy* (1937).

Marvin, Charles Frederick. Meteorologist, chief of the United States Weather Bureau from 1913 to 1934; died in Washington, D.C., June 5, 1943; born in Putnam, O., Oct. 7, 1858. He was the inventor of many meteorological devices still in general use.

Mee, Arthur. British author and editor of children's books and encyclopedias; died in London, England, May 29, 1943; born in Stapleford, Notts, England, July 21, 1875.

Mei Lan-fang. China's most noted theatrical idol and one of the greatest Chinese actors, noted for his female impersonations; died, according to a report by the Central News Agency of China, by poison in Shanghai, China, Aug. 8, 1943; born in Kiangsu, China, 1893. In 1930 he appeared in the leading cities of the United States with popular success.

Melo Franco, Afranio de. Brazilian jurist, diplomat, and Foreign Minister from 1930 to 1933; died in Rio de Janeiro, Brazil, Jan. 1, 1943; born in State of Minas Gerais, Brazil, Feb. 25, 1870. A judge on the Permanent Court of International Justice at The Hague from 1923 to 1929, he was outstanding in his efforts in behalf of hemisphere solidarity.

Meloney, Marie Mattingly. Prominent journalist and editor of *This Week*, the Sunday magazine of the *New York Herald Tribune*, from 1934 to 1942; died in Pawling, N.Y., June 23, 1943; born in Bardstown, Ky. After experiencing several years (1900-04) of newspaper work, she turned to the magazine field, becoming editor of *Woman's Magazine*, 1914-20, also associate editor of *Everybody's*, 1917-20; editor of *The Delineator* during 1920-26, thereafter returning to newspaper work as a member of the *New York Herald Tribune* staff. Mrs. Meloney was the organizer, in 1930, of the annual Forum on Current Problems, held under the auspices of the *Herald Tribune*, with leading personalities of the day as speakers.

Merritt, Abraham. Editor of *The American Weekly*, widely published Sunday newspaper magazine, since 1937 and author of horror stories; died at Indian Rocks Beach, Fla., Aug. 21, 1943; born in Beverly, N.J., Jan. 20, 1884.

Merry del Val, Alfonso. Spanish Ambassador to Great Britain from 1913 to 1931; died in San Sebastian, Spain, May 26, 1943; born, 1864.

Miliukov, Pavel Nikolaevich. Russian statesman and historian; died in Aix-les-Bains, France, Mar. 31, 1943; born in Moscow, Russia, Jan. 28, 1859. An outstanding leader of the Russian liberation movement, chief of the opposition in the Imperial Duma, and Foreign Minister in the Kerensky provisional government in 1917, he was forced to leave the country forever upon the accession to power by the Bolsheviks (1918). Among his works were *State Economics of Russia in the First Quarter of the Eighteenth Century* (1898), *Russia's Catastrophe* (1922), *Russia To-day and To-morrow* (1922), *Sketches on History of Russian Culture* (1925-32).

Millay, Kathleen (Kalloch). Author, poet, and sister of Edna St. Vincent Millay, the poet; died in New York City, Sept. 21, 1943; born in Union, Me., 1897. Her works include: novels, *Wayfarer* (1926), *Against the Wall* (1929); fairy tales, *The Very Little Giant* and *King's Beard* (1934), *Plup Plup's Housewarming* (1935); verse, *The Evergreen Tree* (1927), *The Hermit Thrush* (1929), *Of All the Animals* (1932); plays, *Persephone* (1932), *The Man Who Became a Bird* (1935), *Hollywood Wife* (1939).

Millerand, Alexandre. French statesman, President of the Republic from 1920 to 1924; died in Versailles, France, Apr. 6, 1943; born in Paris, France, 1859. He was educated at the Lycée Vanves, the Lycée Henri IV, and at the University of Paris, where he studied for the bar. He began to practice in Paris in 1881, was counsel to the striking miners of Montceau-les-Mines (1882); was elected to the municipal council (1884), and as a Radical Socialist, to the Chamber of Deputies (1885). In the Chamber Millerand urged many reforms, especially relating to social legislation. In 1899, as leader of the Parliamentary Socialists, he was made Minister of Commerce in the Waldeck-Rousseau Cabinet. In this office he did much to pass legislation favoring the working classes. As the Cabinet went out of office, 1902, Millerand was also expelled from the Socialist party because he had taken office in a non-Socialist Cabinet.

He served in Briand's Cabinet as Minister of Public Works in 1909-10, and was Minister of War under Poincaré in 1912-13. He won great distinction in this office because of his energy in reorganizing the army and infusing it with enthusiasm. Upon the organization of the war cabinet under Viviani, August, 1914, he was again appointed Minister of War. Charged with lack of vigor in prosecuting the war, he resigned with the rest of the Viviani Cabinet in 1915; whereupon he resumed his law practice. As general commissioner of the Republic for Alsace and Lorraine (1919-20), he organized such a successful administration that it led to his succeeding Clemenceau as Premier (January-September, 1920) and upon the retirement of Paul Deschanel (September, 1920), taking over the presidency.

Moffat, J(ay) Pierrepont. U.S. Minister to Canada since June, 1940; died in Ottawa, Canada, Jan. 24, 1943; born in Rye, N.Y., July 18, 1896. In the diplomatic service since 1918, he was chief of the division of European affairs from 1937 to 1940.

Moisseiff, Leon S(olomon). Consulting engineer and world authority on bridge construction; died in Belmar, N.J., Sept. 3, 1943; born in Riga, Latvia, Nov. 10, 1872. He served as consulting engineer for the George Washington Bridge, the Triborough Bridge, the Bronx-Whitestone, and the East River bridges, all in New York City, and for the Ambassador Bridge, Detroit; the Maumee River Bridge, Toledo, and the Tacoma Narrows Bridge, Tacoma, Wash. The recipient of many awards for distinguished achievement in engineering, he was the author of several authoritative articles, including *Deflection Theory for Design of Suspension Bridges*; *High Structural Steels for Bridges*; *Suspension Bridges Under Action of Later Forces*.

Moltke, Hans Adolf von. German Minister to Poland in 1931-33 and Ambassador during 1934-39, and Ambassador to Spain since January, 1942; died in Madrid, Spain, Mar. 22, 1943; born, 1884.

Mordacq, Henri. French army officer; died by suicide in Paris, France, Apr. 12, 1943; born at Clermont-Ferrand, France, Jan. 12, 1868. During World War I General Mordacq placed a conspicuous part

as Chief of Cabinet to Clemenceau (1917-19). As the biographer of Georges Clemenceau, he wrote *Le ministère Clemenceau* (1935), in addition to *La mentalité allemande* (1935), *Les Legendes de la Grand Guerre* (1935).

Morgan, (John) P(ierpont). Banker and financier, son of John Pierpont Morgan (1837-1913); died in Boca Grande, Fla., Mar. 13, 1943; born in Irvington, N.Y., Sept. 7, 1867. Graduated from Harvard in 1889, he became a member of the firm of which his father was head, and later spent eight years with the London house J. S. Morgan and Company. Upon his father's death he inherited the major portion of the senior Morgan's great fortune, including his art collections, and succeeded him as head of J. P. Morgan & Company.

During the first three years of World War I his firm helped France and England buy three billion dollars of war goods here. In 1915 the firm was appointed commercial agent of the British Government in the United States and conducted purchases of all munitions and supplies in the United States. That same year, a loan of fifty millions was made to the French Government, and he organized a syndicate of about 2,200 banks and floated a loan of \$500,000,000 to the Allies. In the postwar period of industrial expansion more than \$6 billion of domestic bonds and loans to foreign governments were underwritten by "The Corner"—the familiar name by which the bank was known to Wall Street.

During these two decades J. P. Morgan & Company was the leading financial institution of the country. However, with the advent of the 1920's the influence of private banking waned. Therefore, it was necessary for the firm in 1940, previously headed by only the two J. P. Morgans to dissolve and merge into J. P. Morgan & Company, Inc., a corporation.

During the half century which Mr. Morgan spent as an officer of the firm, he became the country's best known banker. His institution became a symbol of the capitalistic enterprise which financed the country's tremendous industrial growth. It also served as one of the main links between industry in the United States and industry and governments abroad.

Outstanding among Mr. Morgan's gifts to public museums and collections of the United States and England was the Pierpont Morgan Library; as an institution of research for scholars, and at the same time providing liberal endowment for it. In 1921 he gave the London residence of his father to the United States to house its Embassy to the Court of St. James's.

Morton, James. British pioneer in the development of fast dyestuffs and chairman of Morton Sundour Fabrics, Ltd., Carlisle, England; died near Carlisle, Aug. 22, 1943; born, Mar. 24, 1867. In 1929 Sir James received the first Faraday Centennial Medal "in special recognition of signal service rendered to chemical science and industry by developing and extending manufacture of anthracene dyestuffs and . . . extending their application to silk and wool." He was the author of *William Morris—An Appreciation*; *To Young Weavers*; *History of the Development of Fast Dyeing, and Dyes*.

Mowinkel, Johan Ludwig. Finnish Prime Minister and Minister of Foreign Affairs during 1925-27, 1928-31, and 1933-35; died in New York City, Sept. 30, 1943; born, 1870. Dr. Mowinkel became a member of the Storting, Norwegian Parliament, in 1906 and was president of the Liberal Left party for many years. He was Minister of Commerce in 1921 and Foreign Minister in 1923. He served as

president of the League of Nations Council in 1933. With the German invasion of Norway in 1940 Dr. Mowinkel went to England, where for the next two years he devoted himself to the operation of Norway's merchant marine. He came to the United States in June, 1942.

Nakano, Seigo. Japanese Nazi-Fascist political theorist and journalist; died by hara-kiri in Japan, Oct. 27, 1943; born in Fukuoka-ken, Japan, February, 1886. A Member of Parliament several times, it was said that his ambition was to become the Hitler of the Far East.

Nemirovich-Dantchenko, Vladimir. Russian co-founder (1897) and director of the Moscow Art Theater, and novelist and dramatist; died in Moscow, Russia, Apr. 25, 1943; born at Tiflis in the Caucasus, 1857. He was one of the most colorful and influential figures in the history of Russian literature and drama.

Newsholme, Sir Arthur. British public health officer and author of numerous medical works; died in Worthing, Sussex, England, May 17, 1943; born, 1857.

Nielsen, Alice. Grand and light opera star; died in New York City, Mar. 8, 1943; born in Nashville, Tenn., June 7, 1876. She studied music under Mademoiselle Ida Valerga in San Francisco; from 1893 to 1902 starred in comic opera at home and abroad, during which time Victor Herbert wrote several operas for her; then went to Rome for study and appeared at La Scala, Milan, in 1903, and, as Marguerite in *Faust*, at the Bellini Theatre, Naples. During the next few years she sang in London, at the Covent Garden Theatre, singing opposite Enrico Caruso, and at the New Waldorf Theatre.

Subsequently she toured the United States with the Don Pasquale and San Carlo companies; was a member of the Metropolitan Opera Company during 1909; and star of the Boston Opera Company from 1910 to 1915. In 1917 she formed the Alice Nielsen Opera Company and again toured the United States and Canada, making her last public appearance in 1920 at the Symphony Hall in Boston.

O'Brien, Frank Michael. Newspaperman from 1896 and editor of *The New York Sun* since Dec. 1, 1926; died in New York City, Sept. 22, 1943; born in Dunkirk, N.Y., Mar. 31, 1875. Author: *The Story of The Sun* (1918), *New York Murder Mysteries* (1932); also numerous short stories. In 1921 he won the Pulitzer Prize for an editorial on the Unknown Soldier.

O'Day, Mrs. Carolin Goodwin. Democratic Congresswoman from New York from 1935 to 1943; died in Rye, N.Y., Jan. 4, 1943; born in Perry, Ga., June 22, 1875. Throughout her entire career Mrs. O'Day sought to advance three causes: the development of women's part in national politics; the social and economic betterment of working people; and the preservation of world peace.

Ogilby, Remsen B(rinckerhoff). President of Trinity College, Hartford, Connecticut, since 1920; died by drowning at Weekapaug, R.I., Aug. 7, 1943; born in New Brunswick, N.J., Apr. 8, 1881.

O'Gorman, James A. Democratic Senator from New York from 1911 to 1917; died in New York City, May 17, 1943; born in New York City, May 5, 1860.

Olds, Robert. Major general, U.S. Army; died in Tucson, Ariz., Apr. 28, 1943; born in Woodside, Md., June 15, 1896. An aviator in World War I and long an exponent of Army aviation development, General Olds was assigned in June, 1941, to organize and command the Ferry Command. As a result of his splendid achievement in this endeavor,

which paved the way for swift delivery of aircraft to England, he was appointed commanding general of the U.S. Second Air Force in May, 1942. Soon thereafter illness forced him into inactivity.

Oliver, John Rathbone. Psychiatrist, medical historian, and novelist; died in Waverly, Mass., Jan. 21, 1943; born in Albany, N.Y., Jan. 4, 1872.

Olivier, 1st Baron of Ramsden, Sydney. British colonial administrator; died in Bognor Regis, England, Feb. 15, 1943; born, 1859. Noted for his Socialistic principles, Lord Olivier was governor of Jamaica during 1907-13, and Secretary of State for India in 1924. Also, a poet, musician, and satirist, he was the author of numerous publications, including *Poems and Parodies* (1881); *The Anatomy of African Misery*; and *Jamaica: The Blessed Island* (1936).

Onegin, Sigrid. German-Swedish opera star, who made her debut with the Metropolitan Opera Company in 1922 and made many concert tours of the United States; died in Magliaso, Switzerland, June 18(?), 1943; born in Stockholm, Sweden, June 1, 1891.

Oppenheimer, Franz. German sociologist and political economist; died in Los Angeles, Calif., Sept. 30, 1943; born in Berlin, Germany, 1864. An advocate of the land reform theories of Henry George, Dr. Oppenheimer had held the chair of professorship at Berlin University (1917) and the University of Frankfurt (1919-29). Dr. Oppenheimer came to the United States in 1940 as a refugee from the Jewish persecutions in Germany. His two most noted publications are *The State* (1908) and *System of Sociology* (8 vols., 1918-35); other works include *Die Siedlungsgenossenschaft* (1896), *Grossgrundigentum und Soziale Frage* (1898), *Grundriss der theoretischen Oekonomie* (1926), *Das Kapital, Kritik der politischen Oekonomie* (1937).

Overman, Lynne. Stage and screen actor; died in Santa Monica, Calif., Feb. 19, 1943; born in Maryville, Mo., Sept. 19, 1887. A former jockey, minstrel man, stock company troupier, dance hall singer in Alaska, and vaudeville headliner, he made his first appearance on Broadway in 1916, subsequently starring in several vehicles. In 1934 he turned to the films, appearing in numerous pictures, including *Union Pacific*, *Little Miss Marker*, *There's Magic in Music*, *The Forest Rangers*, and *Star-Spangled Rhythm*.

Packard, Winthrop. Naturalist and writer; died in Canton, Mass., Apr. 1, 1943; born in Boston, Mass., Mar. 7, 1862. Author: *Wildwood Ways* (1909), *Wood Wanderings* (1910), *Literary Pilgrimages of a Naturalist* (1911), *He Dropped Into Poetry* (1940).

Paddock, Charlie (Charles William). Track star, known during the Twenties as "the world's fastest human"; died in the crash of a Navy plane near Sitka, Alaska (World War II), July 21, 1943; born in Gainesville, Tex., Aug. 11, 1900. Commissioned a captain in the U.S. Marine Corps in July, 1943, Paddock was the holder of numerous world's records during his track career. He set the record for the 100-yard dash in 1921, doing it in 9½ seconds. He represented the United States in the Olympic Games in 1920, 1924, and 1928.

Parsons, Edward S(mith). President of Marietta College, Ohio, from 1919 to 1936, thereafter president emeritus; died in Cambridge, Mass., Apr. 22, 1943; born in Brooklyn, N.Y., Aug. 9, 1863. Dr. Parsons was ordained to the Congregational ministry in 1888.

Parton, Lemuel Frederick. Newspaperman and writer, since 1931, of the nationally syndicated column

"Who's News Today"; died in New York City, Jan. 30, 1943; born in Platterville, Colo., 1879.

Patterson, Rufus Lenoir, 2d. Founder and president of the American Machine and Foundry Company, manufacturers of machinery used in the tobacco industry, during 1900-41, and developer of machines to weigh, pack, stamp, and label smoking tobacco, and to manufacture cigars; died in New York City, Apr. 11, 1943; born in Salem, N.C., June 11, 1872.

Pearce, H(aywood) J(efferson). President of Brenau College, Georgia, since 1893; died in Gainesville, Ga., May 1, 1943; born in Columbus, Ga., Aug. 26, 1871.

Pearson, T(homas) Gilbert. Ornithologist, wildlife conservationist, and president of the National Audubon Society from 1920 to 1934; died in New York City, Sept. 5, 1943; born in Tuscola, Ill., Nov. 10, 1873. One of the most widely known ornithologists in the world, Dr. Pearson was instrumental in incorporating the National Association of Audubon Societies (1920) for the conservation of wildlife. His continuance on this subject reached culmination in 1929 with the passage by Congress of the Norbeck-Andersen bill for national wildlife sanctuaries, which provided for establishment of a nation-wide system or refuges for migratory birds. In 1922 Dr. Pearson founded the International Committee for Bird Preservation, organized in 30 countries, and served as its president until 1938. His published works include *Stories of Bird Life* (1901), *The Bird Study Book* (1917), *Adventures in Bird Protection—An Autobiography* (1937). He was editor in chief of *Birds of America* (3 vols., 1917), *Tales from Birdland* (1918).

Pellegrinetti, Ermenegildo. Italian Roman Catholic Cardinal since 1937; died in Rome, Italy, Mar. 29, 1943; born in Camaiore, Italy, Mar. 27, 1876.

Perret, Frank Alvord. Distinguished volcanologist; died in New York City, Jan. 12, 1943; born in Hartford, Conn., Aug. 2, 1867. Dr. Perret lived at the foot of Mount Pelée in Martinique from 1929 until 1939, where (1933) he founded a volcanological museum, displaying relics dug from ruins of eruptions of Mount Pelée and other famous volcanoes. He was the author of several books on volcanoes, including *The Cycles of Vesuvius*.

Phelps, William Lyon. Lampson professor of English literature at Yale University (1901-33), author, lecturer, and critic; died in New Haven, Conn., Aug. 21, 1943; born in New Haven, Jan. 2, 1865. A nationally known literary figure and most-popular professor at Yale, Dr. Phelps graduated from that institution in 1887, Ph.D. 1891. He began his pedagogical career as an instructor of English at Harvard University (1891-92); returning to Yale as an instructor in English literature (1892-96), assistant professor (1896-1901), and Lampson professor until his retirement in 1933 as professor emeritus of English.

The author of more than 25 books and innumerable essays, pamphlets, generally relating to English prose, poetry, and drama, his works include *The Beginnings of the English Romantic Movement* (1893), *Essays on Modern Novelists* (1910), *Teaching in School and College* (1912), *Essays on Books* (1914), *The Advance of the English Novel* (1916), *The Advance of English Poetry* (1918), *Essays on Modern Dramatists* (1920), *Some Makers of American Literature* (1923), *Adventures and Confessions* (1926), *What I Like in Poetry* (1934), *Autobiography with Letters* (1939), *Marriage* (1940).

Phillips, John C. Republican Governor of Arizona from 1929 to 1931; died in Flagstaff, Ariz., June

25, 1943; born near Vermont, Ill., Nov. 13, 1870.

Pihlblad, Ernest F(rederick). President of Bethany College, Kansas, from 1904 to 1941; died in Topeka, Kan., Dec. 9, 1943; born in Kansas City, Mo., Mar. 18, 1873. Dr. Pihlblad was ordained in the Lutheran ministry in 1894.

Plaisted, Frederick William. Democratic Governor of Maine from 1911 to 1913; died in Los Angeles, Calif., Mar. 4, 1943; born in Bangor, Me., July 26, 1865.

Plymouth, 2nd Earl of, Ivor Miles Windsor-Clive. British descendent of Clive of India and one of Great Britain's great landowners; died near Cardiff, Wales, Oct. 1, 1943; born, Feb. 4, 1889.

Polak, Henri. Dutch politician and noted trade union official in the Dutch diamond industry; died in Laren, North Holland, where, being Jewish, he was confined by German occupation authorities, Feb. 18, 1943; born, 1868. Author: *De Vakvereeniging* (1925); *De taal der arbeidersbeweging* (1926), *Het kleine land* (1930).

Polk, Frank Lyon. Public official; died in New York City, Feb. 7, 1943; born in New York City, Sept. 13, 1871. He was counselor to the U.S. Department of State from 1915 to 1919, when he became Under-Secretary of State, 1919-20. In the absence of Secretary Lansing in 1918-19, he was Acting Secretary of State. He was appointed Commissioner of the United States to negotiate peace in 1919 and was head of the American delegation to the Peace Conference in Paris from July to December of that year. Thereafter he practiced law in New York City.

Pollock, Courtenay E. M. British sculptor, inventor, and writer; particularly noted for his World War I memorials; died in London, June 8, 1943; born in Birmingham, England.

Pontoppidan, Henrik. Danish author and winner of the Nobel Prize for literature in 1917; died in Charlottenlund, Denmark, Aug. 21, 1943; born in Fredericia, Denmark, July 24, 1857. Among his publications are *Village Tales*, *The Old Adam*, *Pierre Bonheur*, *The Empire of the Dead*, *From the Huts*, *Lykke Per*.

Portland, 6th Duke of, William John Arthur Charles James Cavendish-Bentinck. British sporting peer and friend of five sovereigns; died at Welbeck Abbey, Nottinghamshire, England, Apr. 26, 1943; born, Dec. 28, 1857. Author: *Fifty Years and More of Sport in Scotland* (1933), *Memories of Racing and Hunting* (1935), *Men, Women and Things* (1937).

Poulton, Sir Edward Bagnall. British zoologist and advocate of the doctrines of organic evolution by natural selection, as first promulgated by Darwin; died in Oxford, England, Nov. 20, 1943; born in Reading, England, Jan. 27, 1856. Author: *Charles Darwin and the Theory of Natural Selection* (1896), *Essays on Evolution*, Oxford (1908), *Charles Darwin and the Origin of Species* (1909).

Pound, Sir (Alfred) Dudley (Pickman Rogers). British First Sea Lord (May 17) and Admiral of the Fleet (July) from 1939 to Oct. 4, 1943; died in London, England, Oct. 21, 1943; born, Aug. 29, 1877. A member of the Royal Navy for 52 years, Sir Dudley was Director of Plans Division at the Admiralty, 1922-25; Chief of Staff to Admiral Sir Roger Keyes, 1925-27; a Lord Commissioner of the Admiralty and Assistant Chief of Naval Staff, 1927-29; Rear Admiral commanding Battle Cruisers, 1929-31; Second Sea Lord and Chief of Naval Personnel, 1932-35; Chief of Staff, Mediterranean, 1935-36; Commander in Chief, Mediterranean, 1936-39.

Sir Dudley, a hero of the naval battle of Jutland in World War I, built his naval career around the

motto "Offense and Attack," and during World War II was generally considered the "father" of British naval strategy. Shortly before the latter conflict began Sir Dudley prophesied that "There's going to be a hell of a fight in the next two or three years."

Powers, James T. Former comedian, light-opera star, and matinee idol whose stage career covered 55 years; died in New York City, Feb. 10, 1943; born in New York City, Apr. 26, 1862.

Prezan, Constantin. Rumanian field marshal and chief of the General Staff during World War I (1917-20); died in the Moldavian district of Vaslui, Rumania, Aug. 27(?), 1943; born, 1861.

Rachmaninoff, Sergei Vasilyevich. Russian-American pianist, composer, and conductor; died in Los Angeles, Calif., Mar. 28, 1943; born in Novgorod, Russia, Apr. 1, 1873. He entered the Conservatory at Saint Petersburg at the age of nine, and in 1885 went to the Conservatory of Moscow, studying piano under Zvyerev and Siloti and composition with Taneiev and Arensky. His graduation thesis was the one-act opera *Aleko*, which was favorably received when produced in 1893. Subsequently he taught piano at a Moscow girls' institute (1893-1903), conducted the Moscow Private Opera for two seasons (1897-99), and the Moscow Imperial Theatre for two more (1904-06), thereafter severing all connections to give time to creative work and concert tours. From 1907 to 1909 he resided in Dresden, Germany, composing. He then returned to Moscow where he remained until 1917, conducting the Moscow Philharmonic concerts in 1911-13. In 1918 he took up residence in the United States, thereafter devoting his time mainly to recitals throughout the country and, after 1927, to composing.

Regarded as one of the foremost Russian composers, Rachmaninoff's music is remarkable for rhythmic variety, richness of color, and harmonic effects, while in power of thematic invention, he surpasses all Russian composers. His works comprise three operas, *Aleko*, *The Niggardly Knight*, and *Francesca da Rimini*; two symphonies; a symphonic poem, *The Isle of Death*; a fantasia for orchestra, *The Cliff*; a Bohemian caprice, *Gypsy Capriccio*; considerable chamber music, including the *Elegiac Trio* in memory of Tchaikowsky; three piano concertos and other music for the piano; songs and mixed choruses, and two cantatas, *Springtime* and *The Bells*, the latter after Edgar Allan Poe.

Rank, Joseph. British flour manufacturer and philanthropist; died at Reigate Heath, Surrey, England, Nov. 13, 1943; born in Hull, England, 1854. He was England's wealthiest man, with a fortune estimated at over £20,000,000.

Ray, Charles. Actor and star of the silent motion pictures; died in Hollywood, Calif., Nov. 23, 1943; born in Jacksonville, Ill., Mar. 15, 1891. He was at the top of his popularity during World War I, and was famous for his portrayals of bashful, country-bumpkin roles. In the early 1920's he turned producer and through this decision subsequently went bankrupt. Included among his picture successes were *Hayfoot, Strawfoot*; *The Ol' Swimmin' Hole*; *String Beans*; *The Clodhopper*; *An Ol'-Fashioned Boy*; *The Girl I Loved*.

Ray, Ted. British golfer, winner of the British open golf championship in 1912 and of the American open championship in 1920; died in Watford, England, Aug. 28, 1943; born on the Channel Island of Jersey, 1877.

Reinhardt, Max. Austrian theatrical producer; died in New York City, Oct. 31, 1943; born in Baden,

near Vienna, Austria, Sept. 9, 1873. He began his professional career in 1893 at the Stadt theater in Salzburg, where his portrayal of elderly roles brought him an engagement at the Deutsches theater, Berlin, in 1894, where he met with considerable success and subsequently became director. As such he produced nearly all the plays of Shakespeare, Molière, Goethe, Strindberg, Wedekind, Ibsen, Shaw, and others, as well as musical comedies and operas. In 1902 he opened his Kleines theater, and in 1906 his Kammerspielhaus. In 1919 he founded the Grosses Schauspielhaus, specializing in impressionistic mass effects. As a master of the new stagecraft, he toured the United States in 1923. In 1924 he presented *The Miracle*, one of the largest theatrical pageant spectacles ever produced, in New York City. For the next ten years he gave many productions in different European cities, and during the 1927-28 season presented several notable ones in New York City.

In 1933, as a result of Nazi anti-Jewish drives, he fled Germany, coming to the United States in 1934, where he immediately began work on a motion-picture scenario of *A Midsummer Night's Dream*. The production (1935) proved to be a financial and dramatic success. Later, he produced *The Eternal Road* (1937) and the Broadway comic opera *La Belle Helene*.

Reuter, Ludwig von. German vice-admiral (ret. 1920), who commanded the scuttling of the German Fleet at Scapa Flow on June 21, 1919; died on Dec. 21, 1943; born, 1868.

Reventiow, Ernst zu. German politician and journalist; died in Munich, Germany, Nov. 21(?), 1943; born in Husum, Germany, 1869. A former Imperial German Naval officer, he was the writer of naval articles for the *Deutsche Tageszeitung*, during World War I, in which he enthusiastically supported the Von Tirpitz plan of submarine warfare. An early supporter of National Socialism and noted for his anti-Semitic and anti-capitalist views, he was, however, often at odds with Nazi policies. As editor of the weekly *Der Reichswehr*, he sharply criticized the Hitler church policy, which resulted in the suspension of the paper in 1935. A member of the Reichstag since 1924, he was the author of numerous works, including *Russisch-Japanische Krieg* (3 vols., 1904-06), *Die deutsche Flotte und ihre Aufgaben* (1906), *Kaiser Wilhelm II und der Byzantiner* (1906), *Deutschlands auswärtige Politik, 1888-1913* (1914), *Der Vampir des Festlandes* (1915), *Die Politische Vorgeschichte des Grossen Krieges* (1918), *Grundlinien einer deutschen Aussenpolitik* (1928).

Richards, Laura Elizabeth. Author of the beloved *Captain January* and other children's books, and daughter of Julia Ward Howe, who wrote *The Battle Hymn of the Republic*; died in Gardiner, Me., Jan. 14, 1943; born in Boston, Feb. 27, 1850. In all, Mrs. Richards wrote some 80 books, most of them for children, including the Toto and Hildegard stories. In 1931 she published her autobiography under the title *Stepping Westward*.

Rickey, James W(alter). Chief hydraulic engineer of the Aluminum Company of America from 1907 to 1938; died in Washington, D.C., Apr. 19, 1943; born in Dayton, O., Nov. 10, 1871.

Roberts, Sir Charles George Douglas. Canadian poet, novelist, and writer of animal stories, whose writings were associated with the early period of Canada's literary growth; died in Toronto, Ontario, Canada, Nov. 26, 1943; born in Douglas, New Brunswick, Canada, Jan. 10, 1860. His reputation rests chiefly on his poetry, the imaginativeness, insight, and artistic finish of which have won dis-

criminating praise. Especially fine is his ode for the Shelley centenary. His novels show accurate observation and offer exquisite descriptions of nature in the Maritime Provinces, where for the most part the scenes are laid; but the characters are considered somewhat deficient in dramatic vigor. His animal stories are sympathetically conceived in the conviction that "we and the beasts are kin."

Sir Charles' volumes of verse include *Orion and Other Poems* (1880), *Ace: An Ode for the Shelley Centenary* (1892), *The Book of the Native* (1897), *Collected Poems* (1900). His novels, nature stories, and other works include *The Canadians of Old* (1889), *Reube Daré's Shad Boat* (1895), *A History of Canada* (1897), *The Kindred of the Wild* (1902), *Red Fox* (1905), *Neighbors Unknown*, animal stories (1911), *Hoof and Claw* (1914).

Robertson, William Bryan. Pioneer aviator and airplane manufacturer, president of the Robertson Aircraft Corporation, Robertson, Missouri; died in the crash of an Army glider at the St. Louis Municipal Airport, St. Louis, Mo., Aug. 1, 1943; born in Nashville, Tenn., Oct. 8, 1893. Major Robertson was a co-sponsor and financial backer of Charles A. Lindbergh's flight to Paris in 1927.

Rolland, Romain. French author; died, according to reports emanating from Paris and also the German news agency (later denied by the DNB), in a German concentration camp, Oct. 19 (?), 1943; born in Clamecy, Nièvre, France, Jan. 29, 1866. He was educated at the École Normale Supérieure, where he was afterward professor of the history of art until called to a chair at the Sorbonne. His doctor's thesis, *Les origines du théâtre lyrique moderne* (1895) was crowned by the Academy. Subsequently he wrote a number of plays, characterized by psychological analysis, style, and vigor. Among these are *Aërt* (1898), *Le triomphe de la raison* (1898), *Danton* (1901), *Le 14 juillet* (1902). He also published notable biographical and critical studies (largely of musicians) and other works: *Beethoven* (1903), *Vie de Michelangelo* (2 vols. 1907), *Musiciens d'aujourd'hui* (1908), *Le théâtre de la révolution* (1909), *Vie de Tolstoi* (1911), *Les maîtres de la musique* (1912).

In 1915 his *Jean Christophe* (in three parts and originally in 10 volumes, 1904-12) brought him the Nobel Prize in literature. The author calls this work the tragedy of a generation that is about to disappear. The principal character of the book is a romantic medium through which Rolland presents his philosophy or world outlook. He takes a musician of genius, places him in contemporary society, and makes him feel all the emotions and experience all the trials that would be the lot of an artist and thinker. Although a great work, the enormous size of the book inevitably results in a lack of cohesiveness, clarity, and proportion.

During World War I his pacifism, as expressed in *Au-dessus de la Mêlée* (1915) and in *Les pré-curseurs* (1919), incurred the extreme displeasure of the French people, and he withdrew to Switzerland. However, his former popularity partially returned after the war, and he wrote the novels *Pierre et Luce* (1918), *Colas Breugnon* (1919), *Clerambault* (1920), and a series called *L'âme enchantée*, comprising *Annette et Sylvie* (1922), *L'été* (1924), *Mère et fils* (1926), and *Beethoven the Creator* (1929). Also the plays *Lilulie* (1920), *Le jeu de l'amour et de la mort* (1925), and *Pâques fleuries* (1926). Other works were *Voyage Musical ou pays du passé* (1920), *Mahatma Gandhi* (1924), *Compagnons de route* (1937).

Roosevelt, Kermit. Army officer, son of the late

President Theodore Roosevelt and his companion on several hunting trips and explorations; died in Alaska, June 4, 1943; born in Oyster Bay, N.Y., Oct. 10, 1889. A veteran of World War I, he enlisted in the British Army upon declaration of World War II (1939). As a major, he saw action at the British occupation of Narvik, Norway (1940), and served until the Allied evacuation. Upon the entrance of the United States into the conflict he transferred to the American Army, being assigned to active duty in Alaska in July, 1942.

Major Roosevelt became interested in the shipping business after World War I, organizing the Roosevelt Steamship Company. In 1931 he merged his organization with the International Mercantile Marine Company, becoming vice-president. During this period he had taken part in numerous hunting and exploration trips: In 1922 he went hunting in Korea and China and in 1923 in the Philippines; in 1925 he went to Asia in search of rare animals.

Major Roosevelt was the author of numerous publications upon his explorations and observations, including *War in the Garden of Eden* (1919), *The Happy Hunting Grounds* (1920), *East of the Sun and West of the Sun* (1926), *Cleared for Strange Ports* (1927), and *Trailing the Giant Panda*, with brother Theodore (1929).

Roper, Daniel C(alhoun). U.S. Secretary of Commerce from 1933 to 1938; died in Washington, D.C., Apr. 11, 1943; born in Marlboro Ct., S.C., Apr. 1, 1867. A politician of the so-called old school—a dry, a conservative, and a power in the Methodist Church—he had held many appointive posts in the Federal Government, including U.S. Tariff Commissioner in 1917, and Commissioner of Internal Revenue during 1917-20. As Secretary of Commerce, he was a protagonist for partnership between the Government and business and was strong in his public reassurances of the fundamental conservativeness of the Administration's policies.

Rosenberg, Arthur. German-American educator and historian; died in New York City, Feb. 8, 1943; born in Berlin, Germany, Dec. 19, 1889. Author: *The State of Ancient Italy* (1913), *Introduction and Sources of Roman History* (1921), *Birth of the German Republic* (1931), *Democracy and Socialism* (1939).

Rosenfeld, Kurt. Prussian Minister of Justice during 1918-19 and prominent figure in the Weimar Republic; died in New York City, Sept. 26, 1943; born in Marienwerder, Germany, 1877. One of Germany's most distinguished lawyers, he was a member of the Reichstag from 1919 to 1933 and chairman of the Socialist Labor Party during 1931-33. A foe of Nazism, Dr. Rosenfeld was forced to leave Germany upon Hitler's accession to power, coming to the United States in 1934 and thereafter carrying on anti-Nazi educational and political activities.

Rowan, Andrew Summers. Colonel, U.S. Army (ret. 1909); distinguished for his feat in the Spanish-American War of carrying the "message to Garcia" (1898), telling that Cuban general the United States was ready to aid his fight; died in San Francisco, Calif., Jan. 11, 1943; born in Gap Mills, Va., Apr. 23, 1857. Author: *The Island of Cuba* (1898), *How I Carried the Message to Garcia* (1923).

Ruppin, Arthur. Palestinian (Jewish) politician and economist; died in Jerusalem, Palestine, Jan. 1, 1943; born, 1875. Professor of sociology of the Jews at the Hebrew University in Jerusalem since 1926 and head of the Economic Research Institute of the Jewish Agency, he was the author of *The Jews of To-day* (1913), *The Agricultural Colonization of the Zionist Organization in Palestine*

(1926), *The Jews in the Modern World* (1934), *Three Decades of Palestine* (1936), and *The Fate and Future of the Jews* (1940).

Sadler, Sir Michael (Ernest). British educator and international authority on secondary education; died in Oxford, England, Oct. 14, 1943; born in Barnsley, England, July 3, 1861.

Samper Ortega, Daniel. Colombian educator and public official; died in Bogota, Colombia, Nov. 3, 1943; born there, 1895. Author of the following novels: *Entre la niebla* (1923), *La Marquesa de Alfandaque* (1923), *La obsesión* (1926), *Zoraya* (1931). Essays: *Colombia* (Madrid, 1929), *Al galope* (1930), *La raza del romancero* (1930), *Otra taza de café* (1933).

Sarraut, Maurice. French politician and publicist; died in Toulouse, France, December (?), 1943; born, 1869. A former Senator and president of the liberal Radical Socialist party of France, he was co-publisher of *La Dépêche de Toulouse*, a newspaper described as an "organ of democracy."

Schinz, Albert. Swiss-American educator and writer; died in Iowa City, Ia., Dec. 19, 1943; born in Neuchâtel, Switzerland, Mar. 9, 1870. Professor Schinz studied at the universities of Neuchâtel, Berlin, Tübingen, and Paris, coming to the United States in 1897 where he attended Clark University (1897-98), becoming an instructor in French at the University of Minnesota (1898-99), professor of French literature at Bryn Mawr College (1899-1913), at Smith College (1913-28), and professor of French at the University of Pennsylvania (1928-41), thereafter visiting professor at various educational institutions.

A contributor on "French Literature" for *The New International Year Book* since 1909, Professor Schinz was the author of various works on French literature, including *Anti-Pragmatism, or Intellectual Aristocracy Versus Social Democracy* (1909); *Accent dans l'écriture française* (1912); *J. J. Rousseau et Michel Rey* (1916); *French Literature of the Great War* (1919); *Jean-Jacques Rousseau, interprétation nouvelle* (1929); *Etat présent des études Rousseauistes* (1941). He had been the editor of several French textbooks.

Schlesinger, Frank. Noted astronomer; died in Lyme, Conn., July 11, 1943; born in New York City, May 11, 1871. He was an observer in charge of the International Latitude Observatory, Ukiah, Calif., in 1899-1903; served as an astronomer at the Yerkes Observatory, 1903-05; director of the Allegheny Observatory, University of Pittsburgh, 1905-20; director of the Yale University Observatory, 1920-41, and professor of astronomy at the University during 1929-41, thereafter professor emeritus.

Dr. Schlesinger gained international recognition during his tenure at the Yerkes Observatory for the development of a method determining stellar distances by photography. Subsequently, to make his measurements more accurate, he devised a new type of measuring engine, which became standard equipment throughout the country. His work in other fields of astronomy included that of spectroscopic binaries and the history of astronomy. Dr. Schlesinger was the author of at least 200 monographs on reduction of astronomical photographs, stellar parallaxes, spectroscopic binaries, variables of the Algol type, and variations of latitude.

Scott, James Brown. Lawyer, educator, and author; died in Annapolis, Md., June 26, 1943; born in Kincardine, Ontario, Canada, June 3, 1866. Most noted of American experts on international law and a life-long advocate of world peace, he was special adviser for the Department of State, and

chairman of the Joint State and Neutrality Board (1914-17), and technical delegate to the Paris Peace Conference (1919). He had been president of the American Institute of International Law since 1915.

He was the writer of numerous volumes on international law, including *The Hague Peace Conferences of 1899 and 1907* (2 vols., 1909); *An International Court of Justice* (1916); *The United States of America* (1920); *The Catholic Conception of International Law* (1934); *Law, the State and the International Community* (2 vols., 1939).

Sears, Richard D., Sr. First national amateur tennis champion of the United States in 1882 and winner of that crown the next six successive years; died in Boston, Mass., Apr. 9, 1943; born, 1861.

Selincourt, Ernest de. British authority on the English poets Keats, Wordsworth, and Spenser; died at Kendal, Westmoreland, England, May 22, 1943; born in Streatham, England, Sept. 24, 1870. Professor of English language and literature at the University of Birmingham from 1908 to 1935 and vice-principal during the last four years of that term, his most noted work was the collection, arrangement, and editing of the correspondence of William Wordsworth and his sister, Dorothy, published in a series of volumes during 1935-41.

Shaffer, John C(harles). Newspaper publisher of *The Indianapolis Star* and *The Muncie* (Ind.) *Star*, and president and publisher of the old *Chicago Evening Post* during 1901-31; died in Evanston, Ill., Oct. 5, 1943; born in Baltimore, Md., June 5, 1853. He had also been president of the John C. Shaffer Grain Company of Chicago (1920-34), and at various times owned and published *The Terre Haute Star*, *The Terre Haute Post*, *The Louisville Herald*, *The Rocky Mountain News*, and *The Denver Post*.

Shaw, Mrs. George Bernard (Charlotte Frances Payne-Townsend). Irish wife of the famous playwright; died in London, England, Sept. 12, 1943. Mrs. Shaw had published translations of French plays, endowed several institutions, established scholarships and was a patron of the arts.

Shimazaki, Haruki (Toson). Japanese writer of poems, short stories, and novels; died at Oiso, Kanagawa Prefecture, Japan, Aug. 22 (?), 1943; born in Nagano-ken, Japan, Feb. 17, 1872. His *A Collection of the Poetical Works of Toson* had gone through 216 editions up to 1934.

Shiozawa, Koichi. Japanese admiral and member of the Supreme Military Council since September, 1941; died in Tokyo, Japan, Nov. 17, 1943; born in Nagano-ken, Japan, March, 1883.

Sikorski, General Wladyslaw. Polish Prime Minister and Commander in Chief of the Polish Army (in exile) since 1939; died in an airplane accident en route to England, July 4, 1943; born in Tuszow, Poland, May 20, 1881. He was graduated from the Lwów High School in 1902 and was conscripted into the Austrian Army in 1905-06, leaving with the rank of lieutenant. Six years after his graduation from the Polytechnic Institute of Lwów (1908), he was called to the Austrian Legions, but subsequently was transferred to the Polish Legions with the rank of lieutenant colonel, becoming commander of the Third Regiment of the Legions (1916) on the Russian-Austrian front with the rank of colonel.

During the Polish-Ukrainian War in 1919 and during the Polish-Russian War in 1920 he was commander of an army corps. His prestige was greatly strengthened in the Battle of Warsaw (1920) when he strategically forced the Bolsheviks

into retreat. After the war in 1921 he became Chief of the General Staff, serving as such until the assassination of President Narutowicz on Dec. 16, 1922. Immediately General Sikorski was called upon to form a government. He accepted, took over as Prime Minister and Minister of the Interior, attempting to restore order in the country. Despite the fact that General Sikorski was successful in his endeavors and attained an apparent vote of confidence, the government's position was basically unstable, and on May 26, 1923 the Sikorski government was overthrown, resigning at once.

In the new (Grabski) regime he was made Minister of War (1924), and organized the Polish Army. He retired from active duty in 1926 and devoted much of his time to writing.

With the commencement of World War II and the fall of Poland, he fled to Rumania and from there to France. In September, 1939, he was appointed chief commander of the Polish Legions. The next day he was made Premier of the "Polish Government of National Union" in exile. On Nov. 10, 1939, he was appointed generalissimo, continuing as Premier.

The works of General Sikorski include *La Campagne Polono-Russe* (1928); *Le Probleme de la Paix* (1931); *La Guerre Moderne* (1935); and various other military and political publications.

In a tribute to General Sikorski, Anne O'Hare McCormick, writing for *The New York Times* said: "... If any man can be called indispensable to his country at a given moment of history, it was Sikorski at the time of his death. He emerged from the defeat of Poland and the obscurity in which he had lived because of his opposition to the policies of its pre-war Government as the national leader and authentic spokesman of a crucified and indestructible nation. . . ."

Slomp, C(ampbell) Bascom. Republican Congressman from Virginia (1907-23) and secretary to President Coolidge from 1923 to 1925, serving as the Chief Executive's conciliator with Congress and taking over much of the party politics for him; died in Knoxville, Tenn., Aug. 7, 1943; born in Turkey Cove, Lee Ct., Va., Sept. 4, 1870.

Spasokukotsky, Sergeo I. Russian distinguished surgeon and medical scientist; died in Russia, Nov. 18, 1943; born, 1870. Known as the father of stomach surgery, he achieved additional world renown as a specialist in the surgery of brain and lung cases. Dr. Spasokukotsky, winner of the Joseph Stalin award, was a member of the Russian Academy of Sciences and of the Moscow Soviet.

Spykman, Nicholas John. Educator, associated with Yale University since 1925 and Sterling professor of international relations from 1928; died in New Haven, Conn., June 26, 1943; born in Amsterdam, Holland, Oct. 13, 1896. Author: *The Social Theory of Georg Simmel* (1925), *American Strategy in World Politics* (1942).

Steagall, Henry Bascom. Democratic Congressman from Alabama since 1915; died in Washington, D.C., Nov. 19, 1943; born in Clopton, Dale Co., Ala., May 19, 1873. At his death Representative Steagall was chairman of the House Banking and Currency Committee and was one of the leaders in the fight against food subsidies.

Stearns, Harold Edmond. Author, critic, and foreign correspondent; died in Locust Valley, Long Island, N.Y., Aug. 13, 1943; born in Barre, Mass., May 7, 1891. His publications include *Liberalism in America* (1919), *America and the Young Intellectual* (1929), *Rediscovering America* (1934), *The Street I Know* (1935), *America—A Re-appraisal* (1937).

Stefan, Paul. Austrian music critic and writer, noted as biographer of great musicians; died in New York City, Nov. 12, 1943; born in Bruenn, Czechoslovakia, 1880. An anti-Nazi refugee, Dr. Stefan escaped to the United States in 1941.

Stein, Sir Aurel. British Central Asia explorer and author of many archeological works, including *Chronicle of Kings of Kashmir* (3 vols.); *Ruins of Desert Cathay* (2 vols.); *The Thousand Buddhas*; *Maps of Chinese Turkestan and Kansu*; *On Alexander's Track to the Indus* (1929); *An Archaeological Tour in Gedrosia* (1931); *On Old Routes of Western Iran* (1941); died in Kabul, Afghanistan, Oct. 28, 1943; born in Budapest, Hungary, Nov. 26, 1862.

Stevens, John F. Noted civil engineer, one of the key figures in the construction of the Panama Canal; died in Southern Pines, N.C., June 2, 1943; born in West Gardiner, Me., Apr. 25, 1853. Chief engineer of the Great Northern Railway system in 1895-1902 and general manager during 1902-03, he was the discoverer of the middle route, Marias Pass, where the railway crosses the Rocky Mountains in Montana.

Stimson, Frederic Jesup. Ambassador to Argentina from 1914 to 1921 and Special Ambassador to Brazil, 1919; died Nov. 19, 1943, in Dedham, Mass.; born there on July 20, 1855. Author: *American Statute Law* (2 vols., 1886), *Stimson's Law Glossary* (1890), *The American Constitution* (1906), *The Western Way—American Democracy* (1929), *My United States* (1931), *Critique of Pure Science* (1938).

Stoessel, Albert. Noted choral and symphony conductor; died in New York City, May 12, 1943; born in St. Louis, Mo., Oct. 11, 1894.

Strakosch, Sir Henry. British banker and authority on international economics and currency; died in Tadworth, Surrey, England, Oct. 30, 1943; born in Brno, Czechoslovakia, May 9, 1871. Author: *The South African Currency and Exchange Problem*; *Monetary Stability and the Gold Standard*; *The Crisis*; *The Road to Recovery*.

Stuart, Charles Edward. Consulting engineer, who achieved international recognition for his work in reorganizing the Soviet Russian coal mining industry during the original Five-Year Plan; died New York City, June 20, 1943; born in Alexandria, Va., Aug. 29, 1881.

Swartwout, Edgerton. Architect, who designed notable structures in New York, Chicago, Boston, and other cities, and who sought unceasingly to safeguard the competition principle so that beginning architects would not be ignored; died in New York City, Feb. 18, 1943; born in Fort Wayne, Ind., Mar. 3, 1870. Author: *The Classical Orders of Architecture* (1918), and *The Use of the Order in Modern Architecture* (1920).

Taft, Mrs. William Howard. Widow of the former President and Chief Justice and mother of Senator Robert A. Taft; died in Washington, D.C., May 22, 1943; born in Cincinnati, O., 1861. Author: *Recollections of Full Years* (1914).

Talbot, Neville Stuart. British prelate, vicar of St. Mary, Nottingham, and rural dean of Nottingham since 1933; died at Henfield, England, Apr. 3, 1943. Author: *The Mind of the Disciples* (1914), *Thoughts on Religion at the Front* (1917).

Tesla, Nikola. Distinguished electrical inventor and designer; died in New York City, Jan. 7, 1943; born in Smiljan, Lika, a border county of Austria Hungary, July 10, 1856. After studying engineering at the Polytechnic School at Graz and the exact sciences at the University of Prague, he came to the United States in 1884.

Subsequently he devoted himself to experimental research and invention. He discovered the principle of the rotary magnetic field, applying it in a practical form to the induction motor; the discovery made possible the alternating current motor and the transmission of power by such current. In 1888 he brought forth the Tesla coil, or transformer, which was the first effective system for utilizing alternating current transmission. Tesla invented many electrical appliances, including dynamos, transformers, induction coils, oscillators, and arc and incandescent lamps, and is principally known for his researches in alternating currents of high frequency and high potential. Since 1903 he had been engaged mainly in the development of telegraphy and telephony. During his lifetime he held more than 900 patents.

Thomson, Sir St. Clair. British laryngologist and writer; died in Edinburgh, Scotland, Jan. 29, 1943; born in Londonderry, Northern Ireland, July 28, 1859. Author: *Diseases of the Nose and Throat* (4th ed., 1926), *The Cerebrospinal Fluid, Shakespeare and Medicine*, *A House-Surgeon's Memoirs of Lord Lister*.

Tillett, Ben(jamin). British trades union leader and Member of Parliament from North Salford during 1917-24, 1929-31; died in London, England, Jan. 27, 1943; born in Bristol, England, 1860. The organizer of numerous trade unions, Tillett with Tom Mann and John Burns led the famous London dock strike (1889), through which far-reaching results in organizing unskilled workers and giving emphasis to the trades union movement were realized.

Trees, Joe Clifton. Noted oil magnate and one of the world's best known wildcatters; died in Pittsburgh, Penn., May 19, 1943; born in Westmoreland Co., Penn., Nov. 10, 1869.

Tresca, Carlo. Italian-American revolutionary syndicalist writer, militant leader of Italian anti-fascists and prominent figure in American radical circles; died by assassination in New York City, Jan. 11, 1943; born in Pulmona, Italy.

Trygger, Ernst. Swedish Prime Minister from 1923 to 1924 and Minister of Foreign Affairs during 1928-30; died in Stockholm, Sweden, Sept. 24, 1943; born there, 1857. The leader of the Conservative party for many years, he was a member of the upper chamber of the Riksdag from 1898 to 1937. He was chancellor of the Swedish Universities and High Schools from 1926 to 1937.

Tussaud, John Theodore. British director of and artist to Madame Tussaud's famous Waxworks Museum, London, since 1886; died in London, England, Oct. 13, 1943; born in Kensington, England, May 2, 1858. He contributed to the Exhibition over a thousand portrait models, many of them of the most eminent personages of the period. Author: *The Romance of Madame Tussauds* (1919), *The Chosen Four* (1928).

Ullstein, Herman. German publisher; died in New York City, Nov. 23, 1943; born in Berlin, Germany, 1875. He was the youngest of five brothers who owned the Ullstein Verlag, one of the world's largest and most prominent producers of newspapers, magazines, and books in pre-Hitler Germany. The Verlag was valued at \$20,000,000 in 1933. In 1934, during the Nazi anti-Semitic drives, the publishing house was seized and the Ullsteins fled Germany.

Underwood, Bert Elias. Photographer, founder, and president of Underwood & Underwood, photographers, from 1882 to 1925; died in Tucson, Ariz., Dec. 27, 1943; born in Oxford, Ill., Apr. 29, 1862. During World War I he commanded the photo-

graphic division of the U.S. Signal Corps, with a major's commission.

Upshur, William P(eterkin). Major general, U.S. Marine Corps; commanding general of the Marine Corps Department of the Pacific since Nov. 7, 1941; died in the crash of a Navy plane near Sitka, Alaska (World War II), July 21, 1943; born in Richmond, Va., Oct. 28, 1881. General Upshur had served in nearly all Marine barracks in the United States and almost everywhere else Marines have been stationed in the past 40 years. He held the Congressional Medal of Honor, which was awarded to him for heroic service in Haiti in 1915.

Valencia, Guillermo. Colombian agriculturalist, writer, and statesman; died in Popayan, Colombia, July 8, 1943; born in Popayan, Oct. 29, 1873. Author: *Oraciones panegiricas* (1915), *Discursos* (1915), *Poemas* (1917), *Cuaderno de notas* (1928P).

Van Dyke 2d, W(oodbridge) S(trong). Motion-picture director of such distinguished cinemas as *Trader Horn*, *Naughty Marietta*, *The Thin Man* series, *Rose Marie*, *San Francisco*, *I Married an Angel*, and *The Painted Veil*; died in Hollywood, Calif., Feb. 5, 1943; born in San Diego, Calif., 1889.

Veiller, Bayard. Dramatic writer of murder mysteries for stage and screen, including *Within the Law* (1912), *The Thirteenth Chair* (1916), *The Trial of Mary Dugan* (1927), and *That's the Woman* (1930); died in New York City, June 16, 1943; born in Brooklyn, N.Y., Jan. 2, 1869.

Vidal y Barraquer, François d'Assise. Spanish Roman Catholic cardinal; died in Fribourg, Switzerland, Sept. 14, 1943; born in Cambrils, Spain, 1868. Cardinal Vidal was ordained a priest in 1899, became titular Bishop of Pentacomie in 1913; Apostolic Administrator of Solsona, 1914; Archbishop of Tarragona, 1919; and created a Cardinal Priest of St. Sabine in 1921.

Vogt, Alfred. Swiss ophthalmologist, professor of ophthalmology at Zurich University since 1923, and author of several books on the subject, including *Verfeinerung der Spaltlampenmikroskopie; Einführung des rotfreien Lichts in die Ophthalmoskopie zur Feinuntersuchung der Netzhaut; Entdeckung des Linsenkapselglaukoms*.

Wakasugi, Kaname. Japanese counselor to the Japanese Embassy in Washington, from February, 1941, to Dec. 7, 1942, who participated in the negotiations undertaken by Japanese Ambassadors Kichisaburo Nomura and Saburo Kuruu before the attack on Pearl Harbor; died in Japan, Dec. 10, 1943; born in Kumamoto City, Japan, 1883. He had been Consul General at New York City from Dec. 21, 1936, to September, 1940.

Waldo, Richard H. President and editor of the McClure Newspaper Syndicate since 1928; died in New York City, June 11, 1943; born in New York City, Sept. 28, 1878. As general manager of *Good Housekeeping Magazine* during 1905-14, he established the Good Housekeeping Institute and founded its much-used "seal of approval." He was publisher of *Hears's International Magazine* in 1921-23.

Waldorf, Ernest Lynn. Methodist Bishop since 1920 and resident bishop of the Chicago area of the Methodist Church since 1932; died in Alexandria Bay, N.Y., July 27, 1943; born in South Valley, N.Y., May 14, 1876.

Wallenberg, Marcus (Laurentius). Swedish banker, head of the Wallenberg banking family, and director of the Stockholms Enskilda Bank during 1892-1920 and chairman of the board since 1938; died in Stockholm, Sweden, July 22, 1943; born in Stockholm, 1864. He was active for many years in



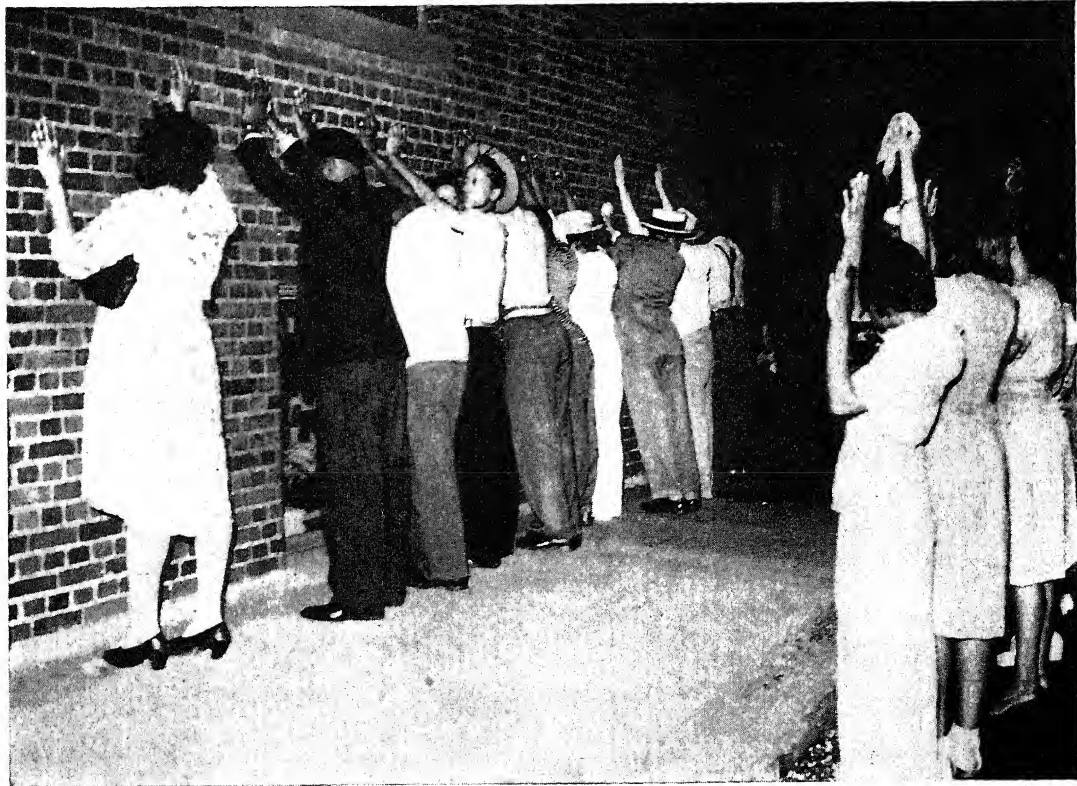
IN HARLEM

Negro women arrested in the rioting which followed the shooting of a Negro soldier by a white policeman.



IN DETROIT

The U.S. Army was called in to stop riots which cost 26 lives. Above right: A colored man who was taken from a streetcar and beaten violently. Below: Police searching among Negro residents for a sniper who shot at them from an apartment building.



International News Photos



METROPOLITAN OPERA STAR MARJORIE LAWRENCE

As Isolde in Wagner's "Tristan and Isolde," which she sang for the first time in the United States at the Metropolitan Opera on March 14. Though she still remains seated while singing, Miss Lawrence has risen to new heights.



Geoffrey Landesman

ARTUR RODZINSKI

Now Conductor and Musical Director of the New York Philharmonic Symphony.



The Ballet Theatre

SPOTLIGHT ON BALLET—IN A SEASON OF GRATIFYING MUSICAL VITALITY

The oldest known form of entertainment—the Dance—achieved tremendous popularity as a distinct art form. Notable performances by the Ballet Theatre included "Dim Lustre" (top left) with Nora Kaye and Hugh Laing and (lower right) "Romeo and Juliet."

international banking and industrial and commercial enterprises.

Waller, Thomas W. (Fats). Negro composer and band leader, who wrote all or collaborated on nearly 400 songs, including *Ain't Misbehavin', I've Got a Feeling I'm Falling, Honeysuckle Rose, Keeping Out of Mischief Now, Concentrating on You*, and *If It Ain't Love*; died in Kansas City, Mo., Dec. 15, 1943; born in New York City, 1904. Recognized as a master technician of the classics as well as swing music, he first began to attract notice when he wrote the music for the Negro musical *Keep Shufflin* in 1927 and for *Hot Chocolate* in 1930. Two years later he achieved national fame as a jazz pianist by appearing on the early morning Rhythm Club program of radio station WLW in Cincinnati and later on the Columbia Broadcasting System. Soon after, he began his motion-picture career, appearing in *Hooray for Love* (1935), *King of Burlesque* (1936), and *Stormy Weather* (1943). Thereafter his renown was assured and with his band he was in demand throughout the nation, reaching the height of his popularity shortly before his death, when he composed the Broadway hit, *Early to Bed*.

Warren, Whitney. Architect, who designed New York City's Grand Central Terminal and the Louvain Library in Belgium; died in New York City, Jan. 24, 1943; born in New York City, 1865.

Watson, George A. Insurance news editor; died in Cranford, N.J., Jan. 14, 1943; born in Aberdeen, Scotland, 1870. Since 1919 he had been associate editor of *The National Underwriter*, weekly insurance newspaper. He had been a contributor to *The New International Year Book* since 1934.

Webb, Mrs. Sidney (Beatrice Potter). British Socialist; died in Liphook, Hampshire, England, Apr. 30, 1943; born in Gloucester, England, Jan. 22, 1858. Along with her husband, Mrs. Webb was instrumental in the development of the intellectual Fabian Society out of which gradually grew the British Labor party. In collaboration with her husband, she was the author of numerous publications, including *The History of Trade Unionism* (1894; new ed., 1902), *English Local Government* (1906-13), *Minority Report of the Poor Law Commission* (1909), *English Poor Law Policy* (1910), *The State and the Doctor* (1910), *The Prevention of Destitution* (1911).

Webster, Leslie Tillotson. Authority in epidemiology and associated with the Rockefeller Institute for Medical Research since 1922; died in Scarsdale, N.Y., July 12, 1943; born in New York City, July 23, 1894.

Wedgwood, 1st Baron, Josiah Clement Wedgwood. British politician and strong proponent of Zionism; died in London, England, July 26, 1943; born, Mar. 16, 1872. Known as the "father of the British Labor party," Lord Wedgwood had been a Member of Parliament since 1906, and vice-chairman of the Labor Party during 1921-24. His publications include *Indo-British Commonwealth* (1922); *The Seventh Dominion* (1927); *Local Taxation in the Empire* (1928); *History of Parliament, 1439-1509*; and *Memoirs of a Fighting Life* (1940).

Wells, H(arry) Edward. Pathologist and authority on cancer; died in Chicago, Apr. 26, 1943; born in Hudson Falls, N.Y., Jan. 4, 1874.

Wertheimer, Max. German psychologist and philosopher; died in New Rochelle, N.Y., Oct. 12, 1943; born in Prague, Czechoslovakia, 1880. Dr. Wertheimer had held professorial posts at the University of Berlin (1922-26), and the University of Frankfurt (1929-33). Since 1933 he had been

professor of psychology on the graduate faculty of the School of Political and Social Science, New York City, a group known as the University in Exile, formed from German scholars driven from Germany. Dr. Wertheimer was the founder of the Gestalt School of Thought. He was the author of numerous monographs, in addition to a recently completed work, *Productive Thinking*.

West, Andrew F(leming). Educator, organizer, and dean of the Princeton University Graduate School from 1901 to 1928; died in Princeton, N.J., Dec. 27, 1943; born in Allegheny, Penn., May 17, 1853. Dr. West was graduated from Princeton in 1874 and obtained his doctorate of philosophy there in 1883, becoming, in that year, professor of Latin at the University and serving as such until his appointment as dean of the Graduate School. Recognized as the "Dean of Classical Studies in America," Dr. West was the author of several educational works, including *Latin Grammar* (1902), *The Proposed Graduate College of Princeton University* (1903), *American Liberal Education* (1907), *Education and the War* (1919), *American General Education* (1932).

Wetzler, Hermann Hans. German-American composer and conductor; died in New York City, May 29, 1943; born in Frankfurt, Germany, Sept. 8, 1870.

Whitehouse, Sir Harold Beckwith. British gynecologist and president of the British Medical Association; died in London, England, July 28, 1943; born in Ocker Hills, Staffordshire, England, Oct. 26, 1882.

Whiting, George. Writer of popular-song lyrics and oldtime vaudeville actor; died in New York City, Dec. 19, 1943; born in Chicago, 1882. His many song hits included *My Blue Heaven, Believe It, Beloved, Strolling Through the Park One Day, Oh What I'd Do for a Girl Like You, High Up on a Hilltop*, and *That's My Idea of Heaven*.

Whiting, Kenneth. Captain, U.S. Navy (ret. 1940); pioneer in both the submarine and aviation services, noted as the first one to experiment with escape from a trapped submarine by entering the torpedo tube and swimming to the surface as the tube was opened; died in Bethesda, Md., Apr. 24, 1943; born in Stockbridge, Mass., July 22, 1881. At his death, Captain Whiting had returned to active duty as commanding officer of the U.S. Naval Air Station, Floyd Bennett Field, Brooklyn, N.Y.

Widener, Joseph E. Noted art connoisseur, financier, and turfman; died in Philadelphia, Penn., Oct. 26, 1943; born there, Aug. 19, 1872. In 1942 he presented to the National Gallery of Art, Washington, D.C., his collection of more than 300 paintings of European art, considered to be one of the finest private collections in the world. As a figure in horse racing, he built the Hialeah race track at Miami in 1931 and was principal owner of Belmont Park, N.Y. See ART.

Wile, Ira S(olomon). Pediatrician, psychiatrist, and proponent of birth control; died in New York City, Oct. 9, 1943; born in Rochester, N.Y., Nov. 29, 1877. Author: *Sex Education* (1912), *The Challenge of Childhood* (1925), *Marriage in the Modern Manner* (1929), *Handedness—Right and Left, The Man Takes a Wife* (1937). Editor: *Sex Life of the Unmarried Adult; The Challenge of Adolescence; The Nervous Child*.

Wiley, Henry Ariosto. Admiral, U.S. Navy (ret. 1929); died in Palm Beach, Fla., May 20, 1943; born in Troy, Ala., Jan. 31, 1867. Admiral Wiley was commander of the United States Fleet from November, 1927, to May, 1929. In 1934 he pub-

lished his autobiography, *An Admiral from Texas*.

Williams, Henry Smith. Physician and painter; died in Los Angeles, Calif., July 5, 1943; born in Durand, Ill., Mar. 4, 1863. Author: *The Effect of Alcohol* (1909), *The Wonders of Science in Modern Life* (10 vols., 1912), *Story of Modern Science* (1923), *Drugs Against Men* (1935), *Etching Is the Ideal Hobby* (1941).

Wood, Sir Kingsley. British statesman; died in London, England, Sept. 21, 1943; born, 1881. Sir Kingsley began his rise to political prominence in 1918 as a Conservative Member of Parliament from Woolwich West, a seat which he held thereafter. During 1919-22 he was parliamentary private secretary to the Minister of Health, acquiring essential experience in the routine of Cabinet procedure. In 1924 he was advanced to the post of Parliamentary Secretary for the Ministry, remaining as such until 1929. In this period he was responsible, in part, for the expansion of the health and social services of the nation.

He was made a Privy Councillor in 1928 and in 1931 became Parliamentary Secretary to the Board of Education. Later in that same year he became Postmaster-General, 1931-35. During 1935-38 he served as Minister of Health. In May of 1938 Sir Kingsley was made Secretary of State for Air. With the realization that the British air arm was pitifully inadequate, Sir Kingsley immediately expanded production of fighter and bomber planes. He saw the Spitfire and Hurricane types put into mass production.

But with the inaugural of Winston Churchill as Prime Minister, Sir Kingsley was shifted in May, 1940, to the post of Chancellor of the Exchequer, remaining as such thereafter. In this position he bore the chief burden of financing Great Britain's enormous war expenditures and was charged with keeping the budget balanced. One of his final acts was to prepare a pay-as-you-go tax plan for the worker's income. His publications include *Law of National Insurance*; *Law and Practice Relating to Housing in England and Wales* (1921); *National Health Insurance Manual*; *Relief for the Ratepayer*.

Woollcott, Alexander. Author, journalist, and raconteur; died as a result of a heart attack suffered while participating in a radio broadcast, discussing the tenth year of Hitlerism in Germany, in New York City, Jan. 23, 1943; born in Phalanx, N.J., Jan. 19, 1887. He joined the staff of *The New York Times* in 1909, becoming dramatic editor in 1914 and remaining as such until 1922, with the exception of two years spent in France during World War I where he spent most of his service working in the editorial rooms of *The Stars and Stripes*, the weekly newspaper of the A.E.F. In 1922 he transferred his talents to the *New York Herald*, shifting to the *New York Sun* in 1924, and to the *New York World* during 1925-28. In 1929 he went on the radio, and in the next 11 years continued broadcasting with steadily increasing success. He also contributed frequently to leading magazines.

His publications include *Mrs. Fiske—Her Views on Acting, Actors and the Problems of the Stage* (1917), *The Command Is Forward* (1919), *Shouts and Murmurs* (1923), *Enchanted Aisles* (1924), *The Story of Irving Berlin* (1925), *Going to Press* (1928), *Two Gentlemen and a Lady* (1928), *While Rome Burns* (1934), *The Woollcott Reader* (1935), and *Woollcott's Second Reader* (1937). His yearning for the stage found fulfillment when he appeared in the plays *Brief Moment* (1931), *Wine of Choice* (1938), and *The Man Who Came to Dinner* (1940).

Worcester, Joseph R(uggles). Noted engineer in the design of steel and reinforced structures and foundations; died in Waltham, Mass., May 9, 1943; born in Waltham, May 9, 1860.

Worsley, Frank Arthur. New Zealand arctic explorer, who commanded the ship *Endurance* in Sir Ernest Shackleton's South Pole expedition (1914-16), and was joint leader of the British Arctic expedition in 1925; died at Esher, Surrey, England, Feb. 1, 1943; born in Akaroa, New Zealand, 1872. Author: *Shackleton's Boat Journey and Crossing South Georgia* (1924), *Under Sail in the Frozen North* (1926), *Endurance* (1931), *First Voyage* (1938).

Yamamoto, Isoroku. Japanese naval officer; died apparently in the crash of a passenger plane into the sea between Singapore and Bangkok, Thailand, although other reports intimated that he committed hara-kiri because of his statement that he would take his own life than lose any Japanese territory; Apr. 7, 1943; born in Nagaoka, Japan, Apr. 4, 1884. Graduated from the Japanese Naval Academy in 1904, he rose through the ranks to the position of vice-minister of the Navy, chief of the Navy air force in 1930, and Commander in Chief of the fleet since 1939.

Admiral Yamamoto was notorious throughout the United States as one of the most unscrupulous Japanese, and as the arrogant boaster who remarked that he looked forward to "dictating peace to the United States in the White House at Washington." It was he who was principally responsible for the initiative and completion of the surprise air attack on Pearl Harbor in World War II.

Yaroslavski, Yemelyan. Russian publicist, politician, a member of the Russian Communist party's Central Committee and a deputy of the Supreme Soviet; died in Moscow, Russia, Dec. (P), 1943. In 1937, for his historical and other writings, he was elected to the Soviet Academy of Sciences. See UNION OF SOVIET SOCIALIST REPUBLICS under *History*.

Yon, Pietro Alessandro. Italian-American organist, composer and musical director of St. Patrick's Cathedral since 1927, New York City; died in Huntington, N.Y., Nov. 22, 1943; born at Settimo Vittone, Piedmont, Italy, Aug. 8, 1886. In 1921 he was appointed honorary organist at St. Peter's in Rome, the first time that this distinction had been conferred. Regarded as one of the greatest organists in the world, he had written more than 70 compositions, including *The Triumph of St. Patrick*, an oratorio based on the life of the patron saint of Ireland.

Young, Art (Arthur Henry Young). Cartoonist and author; died in New York City, Dec. 29, 1943; born near Orangeville, Stephenson Co., Ill., Jan. 14, 1866. A satirical but kindly cartoonist he worked on several newspapers before coming to New York soon after the turn of the century, where he remained thereafter, contributing several notable series of cartoons to popular magazines and illustrating the late Arthur Brisbane's full-page Sunday editorials. For more than 50 years he had crusaded for better social conditions, being active in campaigns for woman suffrage, labor organization, racial equality, and abolition of child labor. Throughout his career he won renown for ironically censorious cartoons depicting the social evils, foibles, and weaknesses of mankind in general and Americans in particular.

Zeeman, Pieter. Netherlands physicist and winner of the Nobel Prize in physics in 1902; died in Amsterdam, the Netherlands, Oct. 9, 1943; born

in Zonnemaire, Zeeland, 1865. In 1885-90 he studied at Leyden, where he became assistant at the Physical Institute (1890-94); privat-dozent (1894-97) and lecturer at the University (1897-1900). In 1900 he was appointed professor of physics at the University of Amsterdam. Professor Zeeman is noted for his discovery in 1896 of the phenomenon known as the Zeeman Effect, which is on the splitting up of spectral lines in a magnetic field. More recently he had worked on the propagation of light in moving media. He was the author of several books on magneto-optics, and was elected to the French Academy of Science in 1933.

Zenatello, Maria Gay. Spanish contralto, who sang at the Metropolitan Opera House in New York from 1908 through 1912, winning acclaim for her role of Carmen; died in New York City, July 29, 1943; born in Barcelona, Spain, June 13, 1879.

NEGRI SEMBILAN. See **BRITISH MALAYA.**

NEGROES. The year 1943 marked noticeable progress and retrogression in race relations in the United States. America's second year of war with its casualty lists and its growing realization of the race question as being a world instead of a national one caused thoughtful and intelligent Americans to revise their concepts. But among others was to be noted a tightening of the determination to maintain the status quo for the Negro. Race riots in Detroit, Philadelphia, New York, Beaumont, Tex., and "zoot suit" riots in Los Angeles, were tragic examples of the latter trend.

There were three lynchings in 1943, as compared with five in 1942. Firm action by officers of the law prevented nine threatened lynchings, and private citizens stopped a tenth.

Labor. The Negro's status in war industry was accurately measured by the barometer of the Fair Employment Practice Committee created on June 25, 1941, by President Roosevelt's Executive Order 8802. Just before leaving for the Casablanca conference in January, 1943, the President ordered the indefinite postponement of the hearings scheduled by the FEPC on alleged discrimination by railroad unions and by 16 Southern railroads. The protests against postponement resulted in the rescheduling of the hearings, which were held during the month of September, 1943, in Washington. The findings of discrimination were subsequently issued by the Fair Employment Practice Committee. The 16 railroads promptly asserted that they would not comply with the directive of the FEPC to cease discrimination.

There was a considerable increase in employment of Negroes in war industry during the year, although, according to a statement by the War Manpower Commission in November, this employment was largely, except in the case of the Federal government, in the unskilled categories. Opposition to employment of Negroes, even in very tight labor markets where war production was being seriously curtailed by labor shortages, was fomented by anti-Negro and anti-labor organizations such as the National Workers League, the Ku Klux Klan, and others, many of which are under investigation by the Federal government for subversive activities.

Armed Services. Segregation of Negroes continued, though there were some modifications during 1943. The all-Negro 99th Pursuit Squadron saw active service in Sicily and Italy. In September the War Department announced that Negroes would be trained to fly medium bombers. Significant in this announcement was the fact that they would be

trained in nonsegregated units as is the case in the training of officers in Officer Candidate Schools. The attitude of the Marines and Coast Guard in the training and promotion of Negroes offered a contrast to that of the Navy, which continued segregated training and refused to permit the training of Negroes as officers. Dorie Miller, a Negro messman who was one of the outstanding heroes of the attack on Pearl Harbor, was reported missing in action as the year closed.

Art. One of the outstanding successes of the Broadway season was the all-Negro version of *Carmen Jones* based upon Bizet's opera *Carmen*, staged beautifully by Billy Rose. Rivaling it both in attendance and critical acclaim was *Othello* starring Paul Robeson.

On October 1 and 3 the United Nations Writers' Congress was held under the joint auspices of the University of California and the Hollywood Writers Mobilization in Los Angeles. Treatment of the Negro and other minorities on the screen, in radio, and in other media was one of the chief topics of discussion and action. A writers' credo was adopted, one of the three chief points being the ending of racial stereotypes, particularly those of the Negro as a buffoon or menial.

Roi Ottley's *New World A-Coming*, a lively and realistic appraisal of the Negro's status, was for many weeks a best seller. Other novels, books, magazine and newspaper articles by both white and Negro writers focused attention upon the problems of race, both nationally and globally. Among those which received widespread attention, whether they dealt wholly or partially with the problem of race, were Wendell Willkie's *One World*, Pearl Buck's *American Unity and Asia*, John Roy Carlson's *Under Cover*, Carey McWilliams' *Brothers Under the Skin*, John Sanford's *The People From Heaven*, and Bucklin Moon's *The Darker Brother*.

The Political Field. Nationwide attention was centered during November upon the election of Justice Francis E. Rivers to the New York City Court on the Republican ticket, and of Benjamin J. Davis, Jr., to the New York City Council on the Communist ticket. The Negro vote was a determining factor in the election of other candidates. On November 20, representatives of the 20 most established mass organizations of Negroes met in New York City to draft and issue a "Declaration by Negro Voters" pointing out that the Negro vote holds the potential balance of power in some 17 States; that that vote is no longer the exclusive possession of any one political party; and that it is determined to use its strength independently and intelligently for the good of America as well as of the Negro.

Two important issues were vigorously pushed during the year affecting the right of Negroes to vote. Most important as far as Negroes were concerned was the test case which was carried to the U.S. Supreme Court involving the exclusion of Negroes from so-called white Democratic primaries in the one-party South. Re-argument was ordered by the Court to take place on Jan. 10, 1944. Coincident with this legal case was the campaign in the Congress for passage of a bill to outlaw the paying of a poll tax by which some 6,000,000 southern whites and 4,000,000 southern Negroes are disfranchised. The bill faced a filibuster at the year's end by Senators from states requiring payment of the poll tax.

Education. A blow to the improvement of education, particularly in the poorer southern States was the defeat in November of the Federal Aid to

Education Bill, which would have appropriated \$3,000,000 annually to raise the standards of education. Defeat of the bill by conservative forces in the U.S. Senate, particularly the manner of the defeat, created disappointment, but lessened none of the determination to secure such legislation. In practically every southern State cases involving the differential in salaries paid Negro and white teachers have been commenced. The seven-year campaign of such legal steps carried on by the National Association for the Advancement of Colored People has resulted in the reduction by \$2,000,000 of the differential of more than \$25,000,000 which existed when the campaign began.

See ART under *Painting*; BIRTH CONTROL; CHILDREN'S BUREAU; EDUCATION, U.S. OFFICE OF; PHILANTHROPY under *Rosenwald Fund*; PSYCHOLOGY under *Racial Studies*; also countries with Negro population.

WALTER WHITE.

NEJD. See ARABIA under *Saudi Arabia*.

NEOPRENE. See RUBBER.

NEPAL. An independent kingdom between Tibet and India. It contains some of the highest mountains of the Himalaya. Area, 54,000 square miles. Population, 5,600,000. Chief towns: Katmandu (capital), 108,805 inhabitants; Patan, 104,928; Bhatgaon, 93,176. The principal exports are jute, rice, hides, oilseeds, ghee, cattle, and lumber; the chief imports are cotton goods, yarn, salt, sugar, spices, and metals. There are valuable forests in the southern part of the country. The revenue for 1940 was estimated at 12,500,000 rupees (1.24 Nepalese rupees equal 1 British Indian rupee). Nepal's government is a military aristocracy based on birth. All power is in the hands of the prime minister, a member of the ruling family. Ruler, King Tribhubana Bir Bikram (succeeded Dec. 11, 1911); Prime Minister, Sir Joodha Shumshere Jung Bahadur Rana (installed Sept. 1, 1932). A Nepalese contingent of some 8,000 men, commanded by Gen. Sir Bahadur Shamshere Jung Bahadur Rana since 1940, fought with British and Indian forces in World War II.

NE STEELS. See IRON AND STEEL; NICKEL.

NETHERLANDS. A constitutional monarchy of northwestern Europe, invaded and occupied by German military forces beginning May 10, 1940. Capital, Amsterdam; seat of the Government, The Hague (transferred temporarily to London, England, on May 13, 1940). Sovereign, Queen Wilhelmina, who succeeded to the throne Nov. 23, 1890, and was crowned Sept. 6, 1898.

Area and Population. The area, including water belonging to municipal territories, is 13,515 square miles. The population on Jan. 1, 1941, was estimated at 8,923,000 (7,935,565 at the 1930 census). About 94 per cent of the people dwell in communities of 2,000 or more. The live birth rate was reported at 20.9 per 1,000 inhabitants in 1942 (20.3 in 1941); death rate, including war losses, 9.5 per 1,000 in 1942 (10.0 in 1941). Estimated populations of the chief cities on Jan. 1, 1939, were: Amsterdam, 793,222; Rotterdam, 612,375; The Hague ('s Gravenhage), 494,773; Utrecht, 163,589; Haarlem, 137,507; Groningen, 120,010; Eindhoven, 111,188; Tilburg, 95,142; Nijmegen, 94,102; Enschede, 90,291; Arnhem, 88,996; Leiden, 77,009. The central section of Rotterdam was completely destroyed by German air attacks on May 14, 1940.

Colonial Empire. The colonial possessions of the Netherlands are treated elsewhere in the YEAR BOOK under the topics NETHERLANDS EAST INDIES (occupied by Japanese forces in 1942), CURAÇAO, and SURINAM. The total area is 793,354 square miles; total population was estimated at 70,760,000 in 1941.

Education and Religion. There is practically no illiteracy. The school enrollment in 1938-39 was: Infant schools, 213,338; elementary, 1,242,778; secondary, technical, and vocational, 271,298; high schools, 3,199; universities, 9,395. German occupation authorities Nazified the educational system. Leiden University and a number of other schools closed in 1941 rather than accept the change. According to the 1930 census, there were 2,890,022 Roman Catholics, 2,732,333 members of the Dutch Reformed Church, 876,958 other Protestants, 111,917 Jews, 10,182 Jansenists, 169,575 belonging to other creeds, and 1,144,393 professing no religion.

Production. Agriculture, manufacturing, commerce, and mining are the principal industries. Yields of the chief crops in 1939 (in metric tons) were: Wheat, 416,500; barley, 146,000; rye, 603,500; oats, 449,200; potatoes, 3,000,000; beet sugar (1939-40), 217,600; linseed, 22,500; flax, 21,300. Livestock (1939): 2,817,314 cattle, 1,553,413 swine, 322,152 horses, and 689,500 sheep. The yield of the sea fisheries in 1939 was 169,900 metric tons, valued at 15,700,000 guilders. The estimated 1940 mineral production was (in metric tons): Coal, 13,000,000; pig iron, 300,000; copper, 1,000; zinc (smelter) in 1939, 20,500. The 1939 output of rayon and staple fiber was about 11,000 metric tons; wood and straw pulp, 108,000; butter, 108,400; cheese, 120,600; margarine, 71,000; shipping tonnage launched, 117,000. Bricks, clothing, boots and shoes, engines, boilers, machinery, cotton and linen fabrics, alcoholic beverages, tobacco products, are other leading manufactures.

Immediately after the occupation, the Germans undertook to integrate the economy of the Netherlands with that of the Reich. Many Dutch factories were forced to work on German war orders, while other factories were closed and the workers transferred to war jobs in the Reich. The German Chamber of Commerce in the Netherlands estimated Dutch industrial production for Germany at 2,500,000,000 reichsmarks for the period May, 1940, to September, 1942.

Foreign Trade. Merchandise imports and exports were 1,516,651,000 and 966,215,000 guilders, respectively, for the calendar year 1939. No trade statistics were published after the German occupation. All Netherlands trade was handled through the Berlin clearing office in reichsmarks. According to the statement of the Netherlands Bank, claims on Germany created by German purchases of Dutch commodities and securities increased from 21,000,000 guilders on Apr. 30, 1940, to 138,000,000 guilders on Dec. 31, 1940, and 1,083,000,000 guilders on Dec. 31, 1941. For distribution of trade in 1939, see 1941 YEAR BOOK.

Finance. Budget receipts, as announced by the German-controlled administration, were (in millions of guilders): 925 in 1940, 1,219 in 1941, and 1,450 in 1942. Expenditures for the same period were reported as follows (millions of guilders): 1940, 1,395 (defense, 231); 1941, about 3,300 (occupation costs, 1,200); 1942, about 3,700. According to the controlled press in the Netherlands, the budget for 1943 showed a deficit of 19,500,000 guilders. The internal public debt increased from 4,218 million guilders on Dec. 31, 1939, to 8,951 millions on

May 30, 1943. Following the German occupation, the guilder (florin) was pegged to the reichsmark at 1 guilder equals 1.33 reichsmarks, or \$0.532 at par.

Transportation. The Netherlands at the beginning of 1940 had some 2,278 miles of railway line, 16,031 miles of highways, and 4,817 miles of navigable rivers and canals. This transportation network was badly damaged during the hostilities of May, 1940, but was reported to have been repaired in considerable part by the end of that year. The Royal Dutch Air Lines (K.L.M.) suspended its European services (except for the new London-Lisbon line) upon the German invasion. Control of K.L.M. was transferred to the K.N.I.L.M. (Royal Netherlands Indies Air Lines) with headquarters at Batavia. Upon the Japanese invasion of the Netherlands Indies, K.N.I.L.M. headquarters were moved to New York. In the autumn of 1943, the Netherlands Commission for Public Relations in Wartime relieved K.N.I.L.M. of control of K.L.M. It appointed five Netherlands living in London as members of a new K.L.M. control board, preparatory to the expected return of the management of the company to Holland.

Except for some coastal trade with Germany, Belgium, and the Baltic countries, shipping from Netherlands ports was suspended following the German occupation. The Netherlands merchant fleet that escaped capture or destruction by the Germans entered the service of the United Nations; in July, 1941, there were 480 Dutch vessels of 2,250,000 tons under Allied control. Up to that date, 77 Dutch ships had been lost through enemy action. The losses were subsequently replaced in part by acquisitions of British and United States ships.

Government. The Constitution of 1814, with its various amendments, vests executive power exclusively in the sovereign while legislative authority rests conjointly in the sovereign and the States-General (parliament). The States-General consisted of an upper chamber of 50 members, chosen by elected representative bodies in the several provinces for terms of six years; and of a lower chamber of 100 members elected for four years by general adult suffrage. In practice the cabinet was responsible to the States-General and the Premier was normally chosen by the sovereign from a political group commanding a parliamentary majority. The Premier proposed the members of his ministry to the sovereign. The Government-in-Exile, established in London May 13, 1940, represented a coalition of the Roman Catholic, Christian Historical, Social Democratic Labor, and Liberal Democratic parties. Premier, Dr. P. S. Gerbrandy (appointed Sept. 3, 1940). For war declarations by the Netherlands Government, see table under WORLD WAR.

Dr. Arthur Seyss-Inquart and Maj. Gen. Friedrich Christiansen were appointed by Reichsführer Hitler as civil and military governors, respectively, of the Netherlands. They assumed office May 30, 1940. All of the Netherlands political parties, except the National Socialist (Nazi) movement led by A. A. Mussert, were dissolved by the German authorities during 1941. A decree of Aug. 12, 1941, scrapped what remained of the autonomy of the Netherlands provincial and municipal councils. Dr. Seyss-Inquart announced Dec. 13, 1942, that Mussert had been recognized by Hitler as "leader of the Netherlands people." For developments during 1943, see below.

HISTORY

German Rule. During 1943 German efforts to impress the Netherlands into Hitler's new order, with the assistance of the Dutch Nazis under Anton A.

Mussert, and the stubborn resistance of the great majority of the Dutch people followed the same pattern as in 1940-42. See the YEAR BOOKS covering 1940 to 1942 inclusive for an account of these developments.

Among the various German maneuvers to inveigle the Netherlands into accepting national socialism were a January decree revising the Dutch inheritance law; the formation in March of financial concerns to encourage Dutch participation in the exploitation of German-occupied territories in Eastern Europe; and the declaration of a moratorium on payments of interest and amortization on loans contracted before the German occupation. The new inheritance law offered strong inducement for young farmers to enter Mussert's Nazi party. It provided that upon a farmer's death his lands should go to the "best farmer" among his sons, to be selected by the Nazi "Land Chamber," instead of being distributed equally among all the sons.

As in previous years, the German occupation authorities made little progress along this line. Accordingly they resorted increasingly to open and violent coercion to achieve their aims. As German military prospects darkened, they were spurred to greater violence by two additional factors—the greater need for manpower to maintain German war production and the urge to smash the Dutch resistance organizations in advance of the threatened Anglo-American invasion of Western Europe. The desperate intensity with which the Germans and Dutch Nazis strove to put these programs into effect and the equally violent reaction of the nation indicated that the struggle was approaching a climax.

Labor Conscription. The drafting of Netherlands for forced labor in the Netherlands and Germany had been carried on in the first years of the occupation by indirect means, such as the withholding of ration cards. But on Feb. 22, 1943, labor conscription was openly introduced by a decree giving Reich Commissioner Arthur Seyss-Inquart full powers over Dutch manpower as well as the means of production and distribution. The decree was issued with a warning that refusal to cooperate with the German war effort would be considered sabotage, which was punishable by death.

Under the leadership of the underground, the Dutch people fought labor conscription with strikes and evasive tactics that greatly reduced the effectiveness of the decree. Nevertheless Nazi sources reported that the number of Hollanders at work in German war plants increased from 302,000 on May 1 to 400,000 on October 1. This increase of 98,000 excluded those dying in Germany, those returned to the Netherlands because of illness, and some 37,000 Netherlands put to work in France. On September 7 all leaves for Dutch workers in the Reich were suspended indefinitely. To curb absenteeism and malingering among Dutchmen drafted for work in the Netherlands, the occupation authorities gave employers unlimited power to impose fines upon workers charged with these offenses.

Measures against Students. The German authorities' long struggle to control Netherlands institutions of higher learning took a new turn when, in connection with his labor conscription decree, Seyss-Inquart ruled that the universities and high schools must provide 8,000 students for German war factories. There was immediate resistance. With the connivance of the school authorities, thousands of students scattered to their homes and hundreds went into hiding.

The Reich Commissioner then decreed on March 16 that all students in college or equivalent courses must sign a written pledge to refrain from joining "any sect of conscience or honor" directed against the occupying authority. He promised that there would be no deportation for students signing the pledge. But at the same time he announced that the number of university students would be limited by examination and that those failing to pass would be assigned to "work contributing to the national welfare." University professors were held personally responsible for the good conduct of prospective students and for the "delivery to the proper authorities" of those failing in their examinations.

Warned by the Netherlands Government in London, 85 per cent of the students refused to sign the declaration of loyalty to the German authorities. Moreover many professors who had not been dismissed previously resigned their positions in protest against these measures. At the end of December it was reported that the freshman registration for the 1943-44 session of the universities was less than one-tenth that of the prewar figure (878 against 3,973 registered for the 1939-40 session). Meanwhile hundreds had been thrown into concentration camps and others executed.

Deportation of Jews. By the end of June, the German authorities had executed the threat made in 1942 to deport all Jews from the Netherlands to eastern Europe, where a living death awaited them (see 1943 YEAR BOOK). The only Dutch Jews who escaped deportation were those married to non-Jews, those having Palestine immigration certificates or original South American visas, those ransomed by non-Jewish acquaintances, and some 15,000 who were estimated to be in hiding. Jewish husbands and wives of non-Jews were reportedly subjected to mass sterilization, according to a London report of November 20. In all 120,000 Jews were believed to have been shipped from Holland to Germany or eastern Europe for forced labor or for purposes of extermination.

Anti-Invasion Measures. Early in the year the Germans speeded up their preparations to resist an Allied landing in the Netherlands. Late in March the Netherlands Government in London reported that a state of emergency had been proclaimed in the Dutch coastal areas, that most of the population had been moved inland, and that whole villages, seaside resorts, and sections of the larger ports had been razed to make way for concrete fortifications and gun emplacements. A decree of August 12 closed the northeastern provinces to all travelers, ostensibly for the purpose of stamping out resistance. However the Dutch underground charged that some 10,000 Netherlands from coastal defense areas and thousands of Germans bombed out of homes in the Reich were being settled in this region.

Another blow at the Dutch resistance movement was struck toward the end of April when Maj. Gen. Friedrich Christiansen, commander of the German occupation forces, ordered the imprisonment of all members of the Netherlands armed forces released on parole toward the end of 1940. Some of the paroled officers and cadets had been jailed in the spring of 1942 to break up secret military organizations founded to assist an Allied invasion. Now the German commander ordered the internment of all former war prisoners "in view of the growing numbers of outright violation of parole undertakings, if not open collaboration with the enemies of Germany."

Beginning with the sudden seizure of some 18,500 former officers, noncommissioned officers, and soldiers on April 29, the Germans and the Dutch Nazi military and police formations continued the roundup for several months. Most of the Dutch war prisoners reportedly were deported to Germany for work in war factories. However the Netherlands Government in London announced on July 2 that "a fairly large number" of Dutch officers had been sentenced to death after a secret trial by a German military court. As a final warning to the thousands of paroled soldiers who went into hiding, the German commander set August 6 as the deadline for their surrender.

General Strike Crushed. Announcement of the decree for the re-internment of war prisoners provoked a general strike and the most serious manifestation of nationwide defiance that the occupation authorities had encountered. The Germans moved promptly and ruthlessly to crush the incipient revolt. A state of emergency was proclaimed May 1 over the entire kingdom. The decree prohibited strikes, lockouts, the bearing of arms, assemblages of more than five persons, and the publishing or distribution of anti-German pamphlets—all under penalty of death. A dusk-to-dawn curfew was imposed. All males between 18 and 35 years of age were ordered to register. Mass arrests, the execution of several score prisoners, and the machine-gunning of strikers and demonstrators soon ended open opposition but sabotage and underground warfare continued on a major scale for many weeks.

In a decree issued September 15 Dr. Seyss-Inquart gave police courts summary powers to "administer justice to terrorists under police martial law," including capital punishment, until further notice. This decree was the signal for a new wave of executions. The Germans announced the killing of 31 more Netherlands—mostly students—during the next three weeks, and the grim toll mounted steadily until the end of the year.

Dutch Nazis Assassinated. Hitler's action assigning Mussert and his Dutch Nazi followers an official role in the occupationary administration in December, 1942, was followed in February, 1943, by a wave of assassinations of leading Dutch Nazis. Those attacked included D. J. Feitsma, Attorney General of Amsterdam, seriously wounded (February 1); Lieut. Gen. Hendrik A. Seyffardt, commander of the Nazi "Netherlands Legion" and the only Dutch general to collaborate with the Germans, shot and killed February 5; Dr. H. Reydon, Secretary-General of the Ministry of Culture and Public Enlightenment, mortally wounded, and Mrs. Reydon, instantly killed, on February 9; Storm Troop leader H. Bannink, shot to death February 10; and C. van Ravenzwaai, Mussert's Secretary for Social Affairs, reported slain on February 14.

On February 16 Mussert announced the formation of a special armed guard to protect Dutch Nazi leaders. Meanwhile German and Dutch Nazi police and armed forces were rounding up hundreds of suspects. Nineteen members of one underground group, executed early in October, were stated in the Dutch Nazi press to have killed 10 Dutch Nazis and attacked eight others. These sources revealed that General Seyffardt and Dr. and Mrs. Reydon were assassinated by Dr. G. W. Kastein, a well-known psychiatrist of The Hague, who leaped to his death from a high window when taken to Gestapo headquarters for questioning.

Mussert further embittered Dutch patriots in mid-March by approving a Seyss-Inquart decree

for the formation under German Elite Guard leadership of a semi-military "national guard," open to all Netherlanders between 17 and 50 years of age. Service in the "national guard" for three months entitled members to jobs on the active police force. Despite all protective measures and numerous executions, assassinations of prominent Dutch Nazis continued. The Dutch Nazi weekly *Volk en Vaderland* of October 2 published an official list of 50 Nazis and Nazi sympathizers slain or wounded between February 1 and October 1. Later victims included Dr. Folkert E. Posthuma, leader of the Nazi "agricultural front," the police president of Utrecht, and many other high police officials.

Mussert was quoted as saying that in all more than 1,000 of his followers had been slain by the anti-Nazi underground. Early in October he announced that all Dutch Nazis would be permitted to bear arms for self-protection, but Reich Commissioner Seyss-Inquart was reported to have restricted this right to specially selected members of a Nazi "self-defense" organization. At the same time Seyss-Inquart threatened to withdraw food supplies from the Netherlands if attacks on Dutch Nazis and on rationing offices did not cease.

Other Forms of Resistance. Other Dutch groups expressed their resistance to German rule in less violent forms. In January all Dutch churches sent joint letters of protest against the mounting tide of executions and deportations to both the German military commander and Reich Commissioner. Seyss-Inquart replied in a broadcast of January 31 that the executions would continue and might be expected to increase unless opposition ceased. In February the Protestant and Catholic churches sent another open letter to the Commissioner protesting against encroachments on freedom of worship and persecution of the Jews.

Another bluntly worded pastoral letter read in Catholic churches on May 16 attacked the conscription of Netherlanders for forced labor and declared the occupationary regime was seeking to undermine Christianity. On June 10 it was announced that the Reformed Church, Roman Catholic Church, and seven other Dutch religious groups had sent a united protest to Seyss-Inquart against the sterilization of Jews who had contracted mixed marriages. They denounced the practice as "the final consequence of an anti-Christian and destructive racial doctrine . . ." These protests were made in the face of arrests of more pastors and priests and threats of severe reprisals. On December 23 it was reported that the German authorities had closed all nine Christian Science churches in the Netherlands and confiscated their property.

Meanwhile Dutch judges, aroused by brutalities and "revolting conditions" in the concentration camps, were reported on May 29 to have threatened to cease issuing verdicts unless conditions improved. Early in June some 6,200 Netherlands physicians struck to avoid compulsory membership in a Nazi-controlled medical association, which advocated the sterilization of racially "objectionable" persons and the deportation of insane and sick persons. Their open refusal to apply "national socialist measures in the field of medicine" was followed by the arrest of several hundred physicians, but some of them were released and a truce was agreed to after several weeks during which medical service was brought to a virtual standstill.

Economic Deterioration. Meanwhile the deterioration of the economy of the Netherlands continued

steadily as Allied bombing forced the Reich war industries to lean more and more heavily upon the resources and manpower of the occupied countries. There was a progressive restriction of Dutch industrial operations, a growing scarcity of all consumer supplies, an alarming weakening of the financial structure, and a general decline in health due to undernourishment. The lowered resistance of the Dutch people was reflected in a serious diphtheria epidemic which swept the country in January and February and in a marked increase in tuberculosis and other diseases that overcrowded all hospital facilities.

The national debt increased nearly threefold and the total of government short-term obligations more than fourfold in 3½ years of German occupation. On October 29, the British Ministry of Economic Warfare reported that the amount due the Netherlands through Germany's blocked-mark system and nonpayment for imports, was about 5,700,000,000 marks, or some 4,104,000,000 guilders, with the annual rate of increase estimated at 1,900,000,000 marks (about 1,368,000,000 guilders).

Government-in-Exile. While proceeding with plans and preparations for an early return to the Netherlands, Queen Wilhelmina and the Government-in-Exile in London continued to direct and encourage the resistance movement in Holland by frequent radio broadcasts. On April 24 the Queen expressed confident hope that the German oppressors and Dutch traitors would alike be brought to justice. On August 13 Premier Gerbrandy added Jacob Burger, an attorney and trade union official newly escaped from Holland, to his Government as Minister without Portfolio. Burger was entrusted with plans for postwar reconstruction in the Netherlands.

A broadcast to occupied Holland on September 21 by Premier Gerbrandy announced that the Queen had signed an act for the institution of a "special state of siege" in the Netherlands after its liberation, under which the military authority would "cleanse and revive the civil authority." The Queen and Premier subsequently gave assurances that the Dutch people would have the right to determine their future government and policies after the transfer of power from the German authorities to the Government-in-Exile.

In an important statement of the Government's foreign policy broadcast to occupied Holland on December 28, Foreign Minister E. N. van Kleffens stressed the desirability of a close understanding between the Netherlands, Belgium, and France on the one hand, and Britain and the United States on the other to offset a prospective violent resurrection of German power during the postwar years. He said such a policy was dependent upon the maintenance of Anglo-American armed power and continuing American interest in Europe. In the meantime, he indicated, the Netherlands and Belgian Governments-in-Exile had reached a definite agreement for postwar collaboration. The Belgian-Netherlands currency stabilization agreement of September 23 was a positive step in this direction (see BELGIUM under *History*).

By an exchange of notes on June 14, the U.S. and Netherlands Governments supplemented the agreement of July 8, 1942, on the principles applying to mutual aid in the prosecution of the war. The new accord made specific provision for the supplying of U.S. armed forces in "territory of the Kingdom of the Netherlands." On November 10 the Dutch and British Governments announced their decision to prohibit the use of opium for

smoking and to abolish opium monopolies in their colonial territories freed from Japanese occupation.

A third daughter was born to Crown Princess Juliana and her husband, Prince Bernhard, in Ottawa, Canada, on January 19. In the autumn Princess Juliana paid an official visit to Surinam—the first time an heir to the throne had visited one of the overseas territories of the Kingdom.

See NAVAL PROGRESS; BANKS AND BANKING; WORLD WAR; AUSTRALIA, BELGIUM, NETHERLANDS EAST INDIES under *History*.

NETHERLANDS EAST INDIES. A group of large and small islands in the East Indies forming the main overseas territories of the Netherlands Kingdom, conquered and occupied by Japanese armed forces in 1942. Capital, Batavia, on the island of Java.

Area and Population. The area, population at the 1930 census, and population density of the various islands is shown in the accompanying table.

Group of islands	Area, sq. miles, 1930	Popu- lation, 1930	Density per sq. mile
Java and Madoera.....	51,032	41,718,364	817
Sumatra.....	164,148	7,677,826	47
Riouw-Lingga.....	12,235	298,225	24
Bangka.....	4,611	205,363	45
Billiton.....	1,866	73,429	39
Borneo:			
West district.....	56,664	802,447	14
South and east districts....	151,621	1,366,214	9
Island of Celebes:			
Celebes.....	38,786	3,093,251	80
Manado.....	34,200	1,138,655	33
Molucca Islands and New Guinea.....	191,682	893,400	5
Timor Archipelago.....	24,449	1,657,376	68
Bali and Lombok.....	3,973	1,802,683	454
Total.....	735,268	60,727,233	83

The estimated population in 1940 was 70,476,000, including 68,832,000 natives. Java and Madoera had 48,416,000 inhabitants; the Outer Provinces, 22,060,000. There were about 250,000 persons classed as Europeans (many had some native blood), including 220,000 Dutch. Chinese numbered about 1,200,000; other alien Asiatics (mostly Hindus and Arabs), 115,000. Over 92 per cent of the population is rural. The 1930 census populations of the chief cities, all of which were in Java except as noted, were: Batavia, including Meester Cornelis, 533,015 (606,800 in 1940); Soerabaja (Surabaya), 341,675 (390,700 in 1940); Semarang, 217,796; Bandoeng, 166,815; Soerakarta, 165,484; Djokjakarta (Jogjakarta), 136,649; Palembang, in Sumatra, 109,069.

Education and Religion. According to the 1930 census, there were 4,296,579 literate persons, of whom 400,877 were able to write Dutch. In 1939 there were 17,291 village schools with 1,839,386 pupils, 3,481 other primary schools (public and private) with 450,684 pupils, 35 secondary schools with 7,795 pupils, and various vocational and special schools. Higher education was given in the Technical College, Bandoeng, and in colleges of law, medicine, agriculture, science, literature, and philosophy at Batavia. About 20 per cent of all pupils attended missionary schools.

About 90 per cent of the natives are nominally Mohammedans and there are about 2,500,000 Christians and 1,000,000 Hindus. However all three religions are superimposed upon the prevailing spirit and ancestor worship.

Production, etc. Agriculture and mining are the chief occupations, although manufacturing was expanding rapidly prior to the Japanese invasion. The islands normally produced 90 per cent of the

world's quinine; of pepper, 79 per cent; kapok, 70 per cent; rubber, 38 per cent; copra, 30 per cent; oil palm products, 20 per cent; tea, 17 per cent; coffee, 6 per cent; sugar, 5 per cent. The islands were likewise a leading source of petroleum and tin. Bauxite, manganese and coal were other mineral products. Before the Japanese invasion, over 6,000 factories and workshops were engaged in processing agricultural and mineral products for export. For the 1940 (latest available) statistics of production, foreign trade, finance, and transportation, see 1943 YEAR BOOK.

Government. Under Dutch rule, the islands were considered an integral part of the Kingdom of the Netherlands. The Government at Batavia handled only local affairs under the guidance of the mother country. There was a governor-general appointed by the Crown, assisted by an advisory Council of the Indies, a cabinet, and a Volksraad (legislative assembly) of appointed and elected members with limited legislative powers. The Netherlands Government appointed the five members of the Council of the Indies and two (the war and navy ministers) of the eight members of the Governor-General's cabinet.

After the German invasion of the Netherlands, the East Indies demanded and obtained a growing measure of autonomy. In February, 1942, the Netherlands Government promised that the islands would be granted a status similar to that of the Philippine Commonwealth after the war, with independent control of all of its affairs except foreign relations and defense. Upon the Japanese conquest, the Netherlands Government transferred to its Minister of Colonies all of the powers formerly exercised by Gov.-Gen. A. W. L. Tjarda van Starckenborgh Stachouwer (who was taken prisoner by the Japanese), with the exception of command of the armed forces and merchant marine. The Japanese established military rule over the islands. For developments during 1943, see below.

HISTORY

Japanese Rule. The anti-Axis trend of the World War, particularly the successful progress of Allied offensives in the South and Southwest Pacific, caused a radical change in Japanese plans and policies in the Netherlands East Indies during 1943. Toward the end of 1942 the Japanese, feeling that their victory was secure, had ended the blackout and other air raid precautions and proceeded to put into effect a program of economic exploitation, with little or no consideration for the natives. But in the latter half of 1943 the Japanese restored and reorganized the air raid precautions system, began the construction of extensive defense installations, and made a strenuous effort to enlist the native population in the Japanese war effort. On May 25 the Japanese Domei Agency announced that Lieut. Gen. Kumakichi Harada had replaced Gen. Hitoshi Imamura as commander in chief of the Japanese forces in the Netherlands East Indies and head of the military administration.

The Netherlands News Agency reported from Melbourne, Australia, on August 4 that Japan was conscripting thousands of Javanese for a labor force to replace shipping lost through Allied air and sea operations. News correspondents who flew with Allied airmen on raids into Japanese-held territory reported that the Japanese were concentrating upon the production of numerous small wooden ships from materials available in the Netherlands East Indies. Japanese radio broadcasts announced that "self-sufficiency" had been substituted for

East Asian "co-prosperity" in plans for the economic development of the islands, due to the growing shortage of shipping.

In mid-August it was reported that the Japanese had ordered all radio receivers in territory under their control adjusted so that only Japanese broadcasts could be heard. At the same time they announced a program of "autonomy" for the island of Java. During September 18 regional councils were established in the Javanese provinces, with 22,000 persons voting out of the 40,000,000 inhabitants of the island. The regional councils met early in October and selected 18 of their number to a Central Council of 43 members. The Japanese commander appointed 23 of the remaining members while two others were "recommended" by local sultans.

The Javanese Central Council met for the first time October 17. It was empowered to "advise and submit proposals connected with administrative affairs to the Japanese military authorities." Addressing the opening session, General Harada said that the war situation was becoming "most serious" and that the main purpose of the Central Advisory Council was "to acquire for the military administration the collaboration of the people" and "the smooth enforcement of military administrative measures." As in other Japanese dependencies, Nipponese officers dominated the deliberations of the council. With its assistance, the Japanese sought to enlist Indonesians in (1) a "defense" corps to relieve the Japanese army of policing duties, (2) large-scale mobilization of labor for war work, and (3) efforts to further self-sufficiency. In November Chairman Sukarno and four other native members of the Council were sent to Tokyo, where they were received in audience by the Emperor and participated with representatives of other Japanese-controlled regimes in propagandist activities (see JAPAN under *History*). However Japanese broadcasts to the populations of the Netherlands East Indies indicated that the effort to win their collaboration against the Allies had achieved only limited success.

Allied Bombings. Meanwhile the Allies, from newly developed bases in Australia and New Guinea, gradually extended the scope and power of their air attacks upon Japanese defense bases and shipping in the former Dutch islands. American Liberator bombers made the first Allied attack upon Soerabaja July 22. This was followed by long-range air blows at the big Japanese-occupied oil center of Balikpapan in Borneo in mid-August; at docks, stores, and fuel depots at Macassar in the Celebes; and other strategically important centers. During the last half of 1943 there were 245 such raids on Japanese bases in the Netherlands East Indies (38 in December). Meanwhile the establishment in October of a separate Allied East Asia Command based on India led the Japanese to prepare for an amphibious attack on Sumatra from the west.

Dutch Preparations. While Dutch and Indonesian airmen trained and equipped in the United States took part in the rising Allied air attacks, Netherlands military and governmental officials laid plans in Australia to aid the forthcoming Allied invasion of their lost empire. A decree of the Netherlands Government-in-Exile of August 8 made all Indonesians outside the Netherlands, Surinam, and Curaçao subject to military conscription. Lieut. Gen. L. H. van Oyen, commander in chief of the newly reconstituted Netherlands Indies Army, arrived in Australia on October 29. His new command superseded the joint Netherlands Army-Navy

set-up under Rear Adm. Pieter Koenraad. Vice Adm. C. E. L. Helfrich remained in Australia as commander of all Netherlands armed forces in the Far East.

The Governing Commission for the N.E.I., established in Australia after Japanese conquest of the islands in 1942 (see 1943 YEAR BOOK), opened a school in Melbourne for training staffs of Dutch and Indonesian civil servants to follow the Allied forces into each island and reestablish civil administration.

NETHERLANDS GUIANA. See SURINAM.

NETHERLANDS WEST INDIES. The colonial possessions of the Netherlands in the West Indies, comprising (1) CURAÇAO and (2) SURINAM, or Dutch Guiana. See separate article on each colony.

NEUTRALITY, NEUTRALS. See ARGENTINA, CHILE, EIRE, PORTUGAL, SPAIN, SWEDEN, SWITZERLAND, and TURKEY, under *History*; PAN AMERICANISM.

NEVADA. A mountain State. Area: 110,540 sq. mi. Population: 110,247 (1940 census); 133,095 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is E. P. Carville (Dem.), inaugurated in January, 1943, for his second four-year term; Lieutenant Governor, Vail Pittman; Secretary of State, Malcolm McEachin; Attorney General, Alan H. Bible.

See MAGNESIUM; TUNGSTEN. For upholding of Nevada divorce law, see LAW under *Decisions Concerning the Federal System*.

NEVIS. See LEEWARD ISLANDS.

NEW BRITAIN. The largest island in the Bismarck Archipelago in the Territory of New Guinea, mandated to Australia by the League of Nations. The island is 300 miles long and has an average width of 50 miles; area, 14,600 square miles. The native population of patrolled areas was 101,373 on June 30, 1940. Rabaul, the capital and chief port and settlement, had a non-native population of 4,674. Rabaul was seized by Japanese forces early in 1942 and converted into an important auxiliary naval and air base for operations against Australia and its approaches. There are many good harbors, the chief being Linden Haven, Powell Haven, Simpson Haven, Jacquinot Bay, and Arawe. See NEW GUINEA, TERRITORY OF; WORLD WAR.

NEW BRUNSWICK. A maritime province of eastern Canada. Area, 27,985 square miles, including 512 square miles of fresh water. Population (1941 census), 457,401 (234,097 male; 223,304 female), of these, by racial origin, British totaled 276,758, French 163,934, Netherland 4,539, etc. Religious membership (1941 census): Roman Catholic 220,454, Baptist 88,766, United Church 63,268, Angli-

can 55,155, Presbyterian 15,382, Pentecostal 5,052, etc. In 1942 there were 12,651 living births, 5,149 deaths, and 4,933 marriages. Education (1940-41): 102,888 students enrolled in schools and colleges. Chief cities: Fredericton (capital) 10,062 inhabitants in 1941, Saint John 51,741, Moncton 22,763, Edmundston 7,096, Campbellton 6,748.

Production. The gross value of agricultural output for 1942 was \$49,876,000 (field crops accounted for \$28,497,000, farm animals \$9,228,000, milk \$7,245,000, poultry and eggs \$2,726,000, fruits and vegetables \$1,503,000, fur farming \$455,000). Chief field crops (1942): oats 6,895,000 bu., potatoes 340,900 tons, turnips, etc. 157,850 tons, hay and clover 970,000 tons. Livestock (June 1, 1943): 220,800 cattle (including 113,400 milk cows), 107,000 sheep, 94,400 swine, 47,500 horses, 1,549,600 hens and chickens, 31,700 turkeys. Fur output (1941-42): 78,910 pelts valued at \$834,671. Fisheries catch (1942): \$7,088,302. The gross value of all lumber products in 1941 was \$11,236,582.

Mineral output in 1942 was valued at \$3,508,323 (coal, 427,982 tons, accounted for \$1,764,232). Manufacturing (1941): 791 plants, 19,600 employees, \$21,718,407 for salaries and wages, \$59,234,107 for cost of materials, \$47,296,960 was the net value of production.

Government. Finance (year ended Oct. 31, 1942): revenue \$11,800,480; expenditure \$10,641,229; total direct and indirect liabilities (less sinking funds) \$97,091,208. The executive authority is vested in a lieutenant governor who is advised by a ministry of the Legislative Assembly, the latter consisting of 48 members elected for a five-year term by the voters (29 Liberals and 19 Conservatives were elected at the provincial general election of Nov. 20, 1939). Ten members (appointed for life) in the Senate and 10 members in the House of Commons represent New Brunswick in the Dominion Parliament at Ottawa. Lieutenant Governor, W. G. Clark (appointed Mar. 5, 1940); Premier, J. B. McNair (Liberal; appointed Mar. 13, 1940).

NEW CALEDONIA. A French island possession in the southwestern Pacific, 850 miles east of Australia. It is 248 miles long and has an average width of 31 miles. Total area (including dependent islands), 7,336 square miles. Population in 1942, 56,000 (20,000 whites and half-castes and the rest Melanesians and Polynesians). Capital, Nouméa (pop. 12,000), which is 1,230 statute miles from Sydney, Australia, and 1,150 miles from Auckland, N.Z. The dependent islands: Isle of Pines (58 sq. mi., pop. 570), Wallis Archipelago (40 sq. mi., pop. 4,243), Futuna and Alofi, Loyalty Islands (800 sq. mi., pop. 11,000), Huon Islands, Bélep Archipelago, Chesterfield Islands, and Walpoole.

Production and Trade. The main agricultural products are coffee, copra, cotton, manioc, maize, tobacco, bananas, and pineapples. Mineral production included nickel (17,500 metric tons, metal content of ore, in 1940), crude chromite (55,790 metric tons, 1940), cobalt, iron, and manganese. Trade (1938): imports 158,571,000 francs; exports 146,453,000 francs (franc averaged \$0.0288 for 1938; \$0.0251, 1939).

Government. The colony is administered by a governor appointed by the French Committee of National Liberation in Algiers, assisted by a privy council and an elected general council. Governor, Christian Laigret (appointed Sept. 14, 1943). New Caledonia adhered to the Fighting French National Committee in London on Sept. 23, 1940. Early in 1942 U.S. naval and military forces landed in New Caledonia with the consent of the French authori-

ties and converted the island into an important base of operations for the campaigns of 1942 and 1943 in the Solomon Islands. See WORLD WAR.

NEWFOUNDLAND. An island lying between the Gulf of St. Lawrence and the Atlantic Ocean. Its dependency, Labrador, lies north of the Gulf of St. Lawrence, between the Province of Quebec and the Atlantic. Newfoundland, with Labrador, forms a part of the British Empire. Capital, St. John's.

Area and Population. Area, exclusive of Labrador, 42,734 square miles. Population in 1943, 335,877 (based on registration under the Food Rationing Regulations), compared with 289,588 at the 1935 census. The inhabitants are mostly of English and Irish descent. Immigrants in 1941 numbered 26,386; emigrants, 22,481. The increase in population since 1935 was largely due to the establishment in Newfoundland of Canadian and United States garrisons and military, naval, and air bases during World War II. The population of the St. John's district rose from 58,886 in 1935 to 81,934 in 1943 (the latter figure included members of armed forces quartered in private buildings in the city). Estimated populations of the chief towns in 1940: St. John's, 48,000; Corner Brook, 6,500; Grand Falls, 4,500; Bonavista, 4,200; Carbonear, 3,400; Twillingate, 3,400. Area of Labrador, 118,400 square miles; population (1935), 4,716; chief settlement, Battle Harbor.

Defense. As of June, 1941, Newfoundland had 2,000 enlisted men in the Royal Navy; a considerable number serving in the Royal Air Force or training in Canada under the Empire Air Training scheme; two regiments of heavy artillery in the British Army, serving mostly in Great Britain; and a small militia force in Newfoundland. Under the Anglo-American agreements of Sept. 2, 1940, and Mar. 27, 1941, the United States shared responsibility for the defense of the island and of the surrounding waters. During 1941-43 new U.S. bases were constructed and occupied on 99-year leases.

In 1940 Canadian military forces were sent to share in the defense of Newfoundland, particularly by guarding the important airfield at Gander, formerly called Hattie's Camp, (for landplanes) and the seaplane base near Botwood, from which transatlantic military and civil air services operated.

Education. Among adults, between 7 and 10 per cent are illiterate. Schools (mainly denominational, with public support) numbered 1,151 in 1943; pupils, 66,439; there were more Anglican schools, and more Roman Catholic pupils, than of any other single denomination. A School Attendance Act, providing for free and compulsory education for children from 7 to 14 years of age, went into effect Sept. 1, 1942. This greatly increased the number of pupils. In 1935, 93,925 of the population were reported to be Roman Catholic; 92,709, Anglican; 76,134, of the United Church; 18,054, in the Salvation Army; 1,460, Presbyterian; and 7,306, of other denominations.

Production. Cod fishing is the chief occupation, engaging 35,018 out of some 55,000 whose occupations were reported for 1935. The codfish catch declined from 1,045,236 quintals (of 112 lb., "dried") in 1939 to 713,722 quintals valued at \$8,759,047 in 1942, due largely to war causes. The number of men engaged in the fisheries during 1942 was 25,645 (17,645 in codfisheries). The 1942 catch of fresh salmon was 2,967,495 lb. worth \$445,145; live lobsters, 1,860,663 lb. worth \$241,886; cod liver oil (exports), 216,073 gal. worth \$593,677 (Newfoundland currency). The annual

seal hunt yielded only 4,698 pelts in 1942 (about 42,000 in 1941).

With only 102,000 acres under cultivation, the total value of farm production in 1942 was \$4,600,000. Livestock in 1941 included 25,000 cattle, 95,000 sheep, 15,000 goats, 15,000 horses, and 8,600 swine. The forests sustain two pulp and paper mills—at Corner Brook on the west coast and at Grand Falls near Botwood on the east coast. Newsprint output in 1942 was 281,263 tons; pulpwood and pit props, 281,263 cords valued at \$5,888,016. Mineral production for 1942 (calendar year) included: Iron ore, 1,192,870 tons, valued at \$3,089,701; lead concentrates, 37,375 tons, \$1,512,222; zinc concentrates, 94,114 tons, \$824,834; copper concentrates, 21,612 tons, \$786,485; fluorspar, 34,690 tons, \$484,876.

Foreign Trade. For the nine months ended Mar. 31, 1943, imports were valued at \$45,111,380 and exports at \$39,399,640. Exports included: Local manufactures, especially newsprint and wood pulp, \$16,183,519; fishery products, \$12,655,834; mineral products, \$7,312,507; forest products, \$827,189. Figures showing the destination of exports were withheld by the Newfoundland Government.

Finance. For the fiscal year ended June 30, 1942, Government receipts were \$23,294,300 (highest in Newfoundland's history); expenditures, \$16,083,000. There was a record surplus of \$7,211,300. Estimates for 1942-43: Receipts, \$18,744,100; expenditures, \$17,722,000. Public debt on June 30, 1941, was £19,980,012 and \$2,412,773. The official exchange rate of the Newfoundland dollar in 1942 was 1 Newfoundland dollar equals \$0.9091 in U.S. currency. Beginning in 1943 the fiscal year was changed so as to end on March 31 instead of June 30.

Transportation. In 1941 there were 705 miles of government-owned railway, the main line extending from St. John's across the center of the island to Port-aux-Basques on the southwestern extremity. Private lines extended 56 miles. Highways extended 6,440 miles in 1943 (only 85 miles paved). Because of inadequate land communications, the bulk of the island's transport and travel moves by boat. The Newfoundland Government operates a fleet of coastal steamers on regular schedules and maintains direct service between St. John's and North Sydney, Nova Scotia. Other steamer services operate between Port-aux-Basques and North Sydney, and (in summer) between Corner Brook on the west coast and Montreal. All internal transport services were placed under the supervision of a Transportation Control Board in 1942. On Jan. 1, 1940, 2,342 ships of 117,338 tons were registered in Newfoundland. Vessels entering and clearing Newfoundland ports during the fiscal year 1940-41 had a tonnage of 4,293,225.

Government. As a result of acute financial difficulties caused by the depression in the fishing industry, Newfoundland temporarily abandoned its status as a self-governing dominion of the British Commonwealth in November, 1933, and became a British colony. The British Government assumed responsibility for Newfoundland's financial obligations and provided an annual grant-in-aid pending restoration of the island treasury's financial solvency. Effective Feb. 15, 1934, executive and legislative authority was vested in the Governor and a Commission of Six—three Newfoundlanders and three British—all appointed by the British Government. Each member of the Commission has charge of a Government department. Governor, Vice Adm. Sir Humphrey Thomas Walwyn, who assumed office Jan. 21, 1936, for a three-year term which was

successively extended. On Oct. 25, 1942, his term was extended for one year beginning Jan. 1, 1943.

History. The question of the future status of Newfoundland was debated during 1943 in both the island and in the British Parliament. The commission form of government established in 1934 had become widely unpopular and the temporary restoration of Newfoundland's economic and financial equilibrium as a result of war conditions stimulated an agitation for restoration of self government in some form.

In June a demand for the resumption of constitutional government in Newfoundland was raised in the British House of Commons. The Dominion Secretary, Clement Attlee, who had visited the island in 1942 to study this question, replied that he had found a great division of opinion in Newfoundland as to whether any change should be made and what kind of change it should be, but that few wanted to return to the pre-1934 institutions. Attlee held that it would be unfair to decide the future of the island while many of the inhabitants were away in the fighting services and other war activities. But he announced that to prepare Parliament for future action on the issue, he was sending a goodwill mission of three Members of Parliament to Newfoundland.

This mission, composed of Alan P. Herbert, Sir Derrick Teunston, and Charles G. Ammon, visited the island during the summer and upon their return to London submitted individual and secret reports of their findings. In a debate on December 16 they reported that the future remained uncertain because there was no certain majority in Newfoundland for any specific type of government and no agreement in the British Parliament as to how far British financial support should be carried. Some of the proposals advanced were: restoration of Dominion status, modification of the existing commission government to permit the election of half its members, union with Canada (as a separate province) or with the United States, and union with the United Kingdom with a status similar to that of Northern Ireland.

There was wide recognition of the prospect that the war-born economic prosperity in Newfoundland would end with the conclusion of the conflict. During 1943 the tapering off of construction or the new U.S. military and naval bases ended employment for many of the 20,000 Newfoundlanders engaged on these projects. However most of these released found new jobs in the neglected fishery and forest industries and on construction in Canada and Greenland. The Wabana iron-ore mines closed down for some weeks in April and May due to shipping difficulties, a large stockpile and labor difficulties arising from attempts to reduce operations. They reopened in mid-May on a part-time basis.

Curtailement of essential imports and inflationary prices for staple commodities led to the institution of sugar and tea rationing early in the year, the fixing of price ceilings on tea and molasses, and the elimination of the special war tax on foodstuffs.

NEW GEORGIA. See BRITISH SOLOMON ISLANDS WORLD WAR.

NEW GUINEA. An island in the East Indies, north of Australia. It comprises Netherlands New Guinea (151,000 sq. mi.), North East New Guinea (69,700 sq. mi.)—the mainland part of the Australian mandated Territory of New Guinea, and Papu (87,786 sq. mi. excluding islands)—a Territory of Australia—formerly called British New Guinea.

Total area, 308,486 square miles. Population, approximately 1,000,000. See AUSTRALIA; NETHERLANDS EAST INDIES, NEW GUINEA, TERRITORY OF; PAPUA. For military operations in 1943, see WORLD WAR.

NEW GUINEA, Territory of. A territory administered by Australia under mandate conferred by the League of Nations from Dec. 17, 1920; temporarily occupied by Japanese armed forces during 1942 and 1943. It comprises North East New Guinea (also called the Mainland), 69,700 square miles; Bismarck Archipelago (consisting of New Britain 14,600 sq. mi., New Ireland 3,340 sq. mi., Lavongai 460 sq. mi., and Admiralty Islands 800 sq. mi.), 19,200 square miles; and part of the Solomon Islands (Bougainville 3,880 sq. mi., Buka and adjacent small islands 220 sq. mi.), 4,100 square miles. Total area, 93,000 square miles. Total enumerated natives in patrolled areas (June 30, 1940), 668,871, including 39,344 indentured laborers; in addition, there were 4,399 Europeans (3,345 British subjects), and 2,099 Asiatics (2,061 Chinese). The former capital, Rabaul (on New Britain), had 10,174 inhabitants in 1939. Chief towns of North East New Guinea: Aitape, Lae (capital of the Territory), Madang, Monumbo, Morobe, Salamaua, Vanimo, and Wewak.

Production and Trade. In 1939-40 the output of gold amounted to 278,922 fine ounces valued at £2,917,526. Platinum, osmiridium, copper, iron, sulphur, and brown coal have been found. The area under cultivation in 1939-40 (exclusive of native reserves) was 277,523 acres, of which 261,676 acres were devoted to coconuts, cocoa 5,827 acres, rubber 2,481 acres, and coffee 2,792 acres. Live-stock (1939-40): 20,474 cattle, 9,327 goats, 6,160 pigs, 1,184 sheep, and 1,323 horses. Timber and fish are other products. Trade (1939-40): imports £1,268,097; exports £3,673,635. Shipping (1939-40): 50,833 tons of cargo entered and 74,862 tons cleared.

Government. Finance (1939-40): revenue £496,689; expenditure £500,614; public debt £16,164 (the official exchange rate of the Australian £ was \$3.228 in 1940, 1941, and 1942). The Territory (prior to the Japanese occupation) was under the control of an Australian administrator assisted by appointive executive and legislative councils. Administrator, Brig. Gen. Sir W. R. McNicoll (appointed Sept. 13, 1934). See AUSTRALIA under *History*; WORLD WAR.

NEW HAMPSHIRE. A New England State. Area: 9,304 sq. mi. Population: 491,524 (1940 census); 454,167 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Robert O. Blood (Rep.), inaugurated in January, 1943, for his second two-year term; Secretary of State, Enoch D. Fuller; Attorney General, Stephen M. Wheeler.

NEW HEBRIDES. A British-French condominium in the South Pacific, 250 miles northeast of New Caledonia. The main islands of the group are Ambrym, Aneityum, Aoba, Efate, Epi, Erromanga, Espiritu Santo, Gaua, Maewo, Malekula, Pentecost, and Vanua Lava. Area, 5,700 square miles. Population (1941), 43,130, including 40,000 natives, 2,213 Asiatics, and 917 Europeans (710 French and 207 British). Capital, Vila (1,200 inhabitants). The principal products are copra, cacao, coffee, and vanilla. Trade (1939): imports £118,618; exports £123,921 (copra £79,906, cacao £22,682, coffee £16,800). Finance (1940): revenue £22,775; expenditure £23,557. The Government is under the joint administration of British and French officials. The French owe allegiance to the French Committee of National Liberation in Algiers, represented by a High Commissioner who delegates his power to a Resident Commissioner. There is a British Resident Commissioner who is subject to the British High Commissioner for the Western Pacific. British Resident Commissioner, R. D. Blandy; French Resident Commissioner, R. Kuter. With the consent of the Anglo-French authorities, U.S. military and naval bases were established on Espiritu Santo Island in 1942 and employed in the ensuing campaigns against the Japanese in the Solomon Islands. See WORLD WAR.

NEW IRELAND. See NEW GUINEA; WORLD WAR.

NEW JERSEY. A middle Atlantic State. Area: 7,836 sq. mi. Population: 4,160,165 (1940 census); 4,101,846 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Walter E. Edge (Rep.), inaugurated in January, 1944, for a three-year term; Secretary of State, Joseph A. Brophy; Attorney General, Walter D. Van Riper.

See ELECTIONS. For constitutional revision, see STATE LEGISLATION under *State Government and Employees*.

NEW MEXICO. A mountain State. Area: 121,666 sq. mi. Population: 531,818 (1940 census); 490,081 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is John J. Dempsey (Dem.), inaugurated in January, 1943, for a two-year term; Lieutenant Governor, J. B. Jones; Secretary of State, Cecelia T. Cleveland; Attorney General, Edward P. Chase.

NEWS COMMENT AND REPORTS. See **NEWSPAPERS**; **MAGAZINES**; **RADIO PROGRAMS**.

NEW SOUTH WALES. See **AUSTRALIA** under *Area and Population*.

NEWSPAPERS. Newspapers in general enjoyed a prosperous year in 1943 but publishers lived in a great apprehension over the future supply of newsprint. Circulations, even though arbitrarily limited in many cities, rose to a new peak in the United States as a whole, and the movement toward higher subscription and single copy prices, already well under way in the year before, gained new momentum. Advertising volume increased and rates generally were higher. A considerable number of economies helped to offset the higher wage and salary rates paid to the staffs, and impartial and competent observers agreed that the newspaper industry was on a sound basis, but was approaching a hard test as reductions in the quotas of newsprint grew more severe.

The service of the newspapers in covering the news of the war remained the chief concern of the staffs. Correspondents at the front took greater and greater risks and the number of those killed increased steadily. Censorship was inclined to be somewhat less rigid and slow as the war progressed and as the public demanded information of operations. The domestic situation, political and economic, moved to the front as a topic hardly less important than the war itself.

While British newspapers were struggling along on 17 per cent of the amount of newsprint used before the war (increased late in the year by 11 per cent to be used solely for copies distributed to the armed forces) newspapers in the United States began 1943 on a quota only 5 per cent less than the tonnage consumed in 1941 for net paid circulation. A second cut of 5 per cent followed, and in November the increasingly critical situation was reflected in regulations of the WPB enforcing, for the first quarter of 1944, a sliding scale of reductions ranging from none for newspapers using less than 100 tons a year to 24 per cent for those using over 1,000 tons. The amount of paper allowed in inventory also was reduced. It was certain that the consequences of this order would be severe indeed and newspapers ended the year adopting various measures to save paper in addition to those already in force.

Some daily journals had "frozen" their circulations, declining to accept any new subscription order except to replace a cancellation. Several New York newspapers cut their out-of-town circulations. *The New York Times* omitted hundreds of columns of advertisements monthly and limited classified advertisers to small space; this action was typical of what some publishers in other large cities were doing. In more than 25 of the metropolitan centers of the country, rationing of advertising was enforced in one form or another. Some publishers issued so-called "victory editions" on Mondays or Saturdays of 8 or 10 pages, and containing little or no advertising. "Split run" placing of advertising—the use of one announcement in half the run and another in the other half—was also tried, a device already employed in Britain. Comic sections were reduced in size and many typographical changes made to conserve space. Experiments with

lighter-weight or 30-pound newsprint, and with de-inked paper, were announced.

The diminishing supply of newsprint was attributed to two causes. One was the lack of labor to cut pulpwood. Canada, the chief source, had begun the year expecting to send to the United States 210,000 tons monthly, in addition to the 70,000 tons produced in this country and 12,500 in Newfoundland. It was found necessary later to reduce Canadian shipments to 182,000 tons. The demand for pulpwood for war and other uses also was a factor and the newsprint mills faced dwindling receipts of logs. Various campaigns to increase the cutting of pulpwood and the delivery of waste paper to cardboard mills were undertaken.

The second cause was the mistaken policy of granting newsprint on appeal in excess of the quotas established by the 1941 formula. Newspapers in some communities where populations were swollen by war industries asked for and received extra newsprint to meet circulation demands. Other newspapers in medium to large cities—chiefly those of mass circulation—received extra allotments, the legitimate need for which was not readily apparent. Extra tonnage granted on appeal was approximately 65,000 tons a quarter and this largely offset other savings. The consequence was the sharp reduction ordered for 1944 and a tightening of the grants on appeal. A second price increase of \$4, to \$58 a ton, for newsprint was made effective in the year.

Circulation of newspapers in the United States had risen to a new peak of 43,750,000 copies daily but was certain to decline as the more drastic newsprint cuts were put in operation. Almost one half of the newspapers were found to be charging five cents a copy for the daily issues, and carrier-delivered and subscription prices were almost universally increased. Circulation revenue reached a far more substantial percentage of the publishers' gross revenue than ever before.

Advertising volume gained approximately 14 per cent over 1942 and 7 per cent over 1941 despite the arbitrary limitations necessarily imposed by many newspapers. The rate of gain slowed appreciably in the closing months as space restrictions grew tighter. A survey also showed that the gains had been in the larger cities and that the non-metropolitan newspapers had generally reported a small loss of three to four per cent compared with 1942. Lack of consumer goods in stores had led to a decrease in retail advertising in smaller communities. Also, the newspapers in non-metropolitan cities had not shared equally in the extensive volume of institutional advertising placed by large industrial companies. The competition for labor in the more thickly populated areas had expanded greatly the "help wanted" advertising in the classified columns.

The total number of daily newspapers in the United States at the end of 1943 was 1,754, a loss of 34 in the year. In the previous twelvemonth 70 newspapers had ceased publication. The rate of loss had slowed appreciably but it was increasingly evident that fewer publishers were able, or thought it worth while, to continue the publication of unprofitable newspapers. The number of weekly newspapers dropped from a total of 10,682 in the previous year to 10,200, a loss of 382. The loss of pressmen, and the impossibility of replacing them, was responsible for many suspensions in this field.

A number of strikes interfered with the production of newspapers in various cities; the most serious affected the mailing and delivery of New York newspapers. A deliberate slowdown of the typo-

graphical union in Newark, N.J., was in protest against the amount of increase allowed by the WLB. In general the increased scales of the mechanical unions approached the limits of 15 per cent over January, 1941, allowed under the Little Steel formula. The newspaper industry was fortunate in having a special advisory panel set up by the WLB to rule upon wage contracts.

The American Newspaper Guild reported at its annual convention that it had 22,202 active members, a gain of 3,945 in the year, and had contracts with 135 daily newspapers. A division of opinion on certain policies was seen in the protest by the New York Guild against the interference of the national organization in local affairs. One of the most important labor issues was debated in the hearing ordered by the WLB on the maintenance-of-membership clause in Guild contracts. A group of the nation's most important publishers argued against the WLB ordering this clause upheld, on the ground that such action was an infringement of the freedom of the press.

In the suit against the Associated Press charging that this cooperative news-gathering agency, by reason of its bylaws governing membership, had conspired to restrain and monopolize interstate commerce in the distribution of news, the government won a victory in the Federal District court, which ruled that the AP had the right to pass upon those applying for membership but must change its rules to prevent a member in the same field (that is, in the same city as the applicant, and in the morning, evening, or Sunday field sought) from presenting a ban to election. If this bylaw was changed satisfactorily, the exclusive right to republication of spontaneous local news which the AP requires of its members would be legal. The Department of Justice filed a judgment on November 12 carrying out the decision of the court. Directors of the AP were expected to take the issue to the Supreme Court to get a final ruling on this momentous case. On several minor points—the sale of a photographic agency to the AP and an exclusive exchange arrangement with the Canadian news agency—the AP was upheld.

The AP had modified its bylaws as to admission of members in 1942; an affirmative vote of the majority of regular members was required and in a city in which there were one or more existing memberships, an applicant would pay to such members a sum equal to 10 per cent of all assessments in the same field since October, 1900. In New York, a new member, morning and Sunday, would have been compelled to pay \$824,333 and an evening member \$575,003; in Washington, D.C. the corresponding figures would be \$118,930 and \$88,293.

Evidence in the suit brought out the facts that the AP had its own staffs of 5,394 persons, 94 news bureaus in the United States, and offices in 250 cities. Its operating expenses in 1942 were \$11,305,577.

The suit had grown out of the refusal to admit *The Chicago Sun*, owned by Marshall Field, to AP membership. Mr. Field had charged that the AP was a violation of the anti-trust laws and that therefore his application was in substance "a threat of litigation"; and at the same time the anti-trust division of the Department of Justice had interrogated members concerning their attitude toward Mr. Field's efforts to become a member. Counsel for the AP declared that the case involved the fundamental freedom of the press. An interesting aspect of the case was the argument of the AP that rival newsgathering services gave adequate coverage. It was surmised by some that a final de-

cision against the AP opening membership widely might seriously harm the other services and might eventually lead to a greater degree of monopoly than was now charged against the AP.

Relations of the press with the government did not improve. For some years a number of publishers had been convinced that President Roosevelt had sought to belittle the value and influence of the press as a whole. Whatever the truth of this charge (it is probably more accurate to say that Mr. Roosevelt, not without reason, had been antagonistic to a certain class of newspapers), as discontent over domestic policies increased, the correspondents and the President grew apart. The President denounced one columnist as a "chronic liar"; he rebuked other correspondents for what he said were inexcusable inaccuracies. Two members of the cabinet, Mr. Hull and Mr. Ickes, also attacked members of the press or specific newspapers.

Many newspapers were inclined to be critical of the operations of the OWI as a part of a general dislike of administration policies. Elmer Davis was conceded by more impartial observers to have handled his task as well as anyone could under the hampering restrictions of the Army and Navy upon news. Differences of opinion between the OWI, which sought to give prompt and more adequate war information to the people, and the Army and Navy censors continued. There were also some heated exchanges between the official government news authorities of the United States and Great Britain over the priority of certain important news releases, notably those on the meeting of Mr. Roosevelt, Mr. Churchill, and Chiang Kai-shek in Cairo.

The OPA relied almost wholly on the newspapers to distribute to the public the complicated news of retail prices and ration-point changes. The task was effectively carried out.

Newspapers continued to make extraordinary efforts to cover events of a war fought on every continent and in every sea. The list of dead and wounded grew as correspondents took great risks at the front. *Editor & Publisher*, the trade magazine, estimated that casualties in the press corps had been 20 per cent; that 60 members of the 350 covering the war had been killed, seriously wounded, or captured, and many others had been hospitalized. Several men were lost in 1943 in bombing raids over Germany, among them Robert Post of *The New York Times* and Lowell Bennett of the INS. John H. Thompson of the *Chicago Tribune* actually parachuted from a plane in Sicily with the troops behind the enemy lines and was wounded. The list of killed and wounded is too long for inclusion here, but the mounting toll was proof of the bravery of the men and women reporting the news. Also there was no question that citizens in the United States were more thoroughly informed on the events of the war, thanks to the enterprise of the newspapers, than the citizens of any other country.

The Bankhead bill, providing that the Federal government spend \$30,000,000 in advertising space in newspapers to promote war-bond sales aroused considerable debate. Before the bill passed the Senate, the amount was reduced to less than \$15,000,000 the bulk of which was to be spent in communities of less than 10,000 population. The measure was attacked as a subsidy to the press. Its supporters pointed out that the British government used paid advertising to further the sale of war bonds and that the smaller newspapers in this country had not received much of the advertising placed by private companies to encourage the pur-

chase of bonds. It was generally agreed that the bill was an ill-considered one and the weight of competent newspaper opinion was against it. The ANPA registered its opposition, but a number of associations composed of smaller newspapers supported it. One of the outstanding war services of the American newspapers was the tremendous support given to bond sales.

A tentative proposal by the House Ways and Means Committee framing the tax bill to double second-class postage rates was finally eliminated in committee. This increase would have affected smaller newspapers most adversely.

Materials other than newsprint entering into the production of newspapers were in no worse supply than in 1942. The quota of zinc for engravings actually was increased from 50 per cent to 60 per cent of the quantity formerly used. Many publishers began the use of thinner gauge zinc. The chief trouble encountered was in motor transportation as trucks and tires wore out and could not be satisfactorily replaced.

A case which attracted wide attention was the action of the Federal government against fifteen New York department stores which had withheld advertising from *The New York Times* in protest against an increase in rates. The *Times* had no part in commencing this action, which the government charged was "conspiring to regulate the advertising rates of *The New York Times* and other newspapers in the New York metropolitan area." The stores pleaded nolo contendere and were fined \$5,000 apiece.

In foreign lands newspapers suffered even more severely than in the United States from shortages of materials and, except in Britain, were increasingly subject to government controls on policies. Germany, in March, suspended more than 100 of the nation's 750 daily newspapers to conserve manpower for war efforts. A city with less than 100,000 population was permitted to have not more than one daily newspaper. The *Zeitung Am Mittag* was discontinued and the morning editions of the *Berliner Volks-Zeitung*, the *Deutsche Allgemeine-Zeitung*, and the *Berliner Morgenpost* were merged. The last Catholic newspaper in the Reich, the *Kirchliche Bistums-Blätter*, suspended.

In Argentina some pro-Axis newspapers continued to flourish as well as newspapers which sought to bring that country into collaboration with the Allied nations. A decree against a Yiddish newspaper led to a protest from the United States. See ARGENTINA under *History*.

No major change took place in the British press. In four years only eight daily newspapers and one Sunday had ceased publication, a surprisingly small casualty list. Advertising revenues aggregating \$88,935,000 for the year were down 50 per cent from prewar figures. Newsprint was \$128 a ton compared with \$40 in 1938. In Great Britain there were 93 afternoon newspapers, 47 morning, 17 Sunday, and 1,341 weeklies.

No important changes in ownership were reported in the year. Frank Gannett added the Binghamton, N.Y., *Press* to his chain. Linwood I. Noyes, of the Ironwood, Mich., *Globe* was elected president of the American Newspaper Publishers Association. See CENSORSHIP, OFFICE OF; FRENCH LITERATURE; PAPER AND PULP; PULITZER PRIZES. Compare MAGAZINES.

CHARLES McD. PUCKETTE.

NEWSPRINT. See PAPER AND PULP.

NEWSREELS. See COORDINATOR OF INTER-AMERICAN AFFAIRS. Compare DOCUMENTARY FILMS.

NEW YORK. A middle Atlantic State. Area: 49,576 sq. mi. Population: 13,479,142 (1940 census); 12,789,130 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Thomas E. Dewey (Rep.), inaugurated in January, 1943, for a four-year term; Lieutenant Governor, Joe R. Hanley; Secretary of State, Thomas J. Curran; Attorney General, Nathaniel L. Goldstein.

See EDUCATION; ELECTIONS; LAW under *R form of Legal Procedure*; RAPID TRANSIT; STATE LEGISLATION under *State Government and Employees*; TUNNELS; WATER SUPPLY.

NEW ZEALAND. A British Dominion in the South Pacific Ocean; principally two islands about 1,200 miles east of the southeastern coast of Australia. The Dominion has jurisdiction over Western Samoa (see SAMOA), the Union Islands (including Tokelau), and some other islands of Oceania; also over the Ross Dependency, a part of the Antarctic Zone. Capital, Wellington.

Area and Population. New Zealand proper has an area of 103,723 square miles (North Island, 44,281; South Island, 58,093; Stewart Island, 670; Chatham Islands, 372; outlying islands, 307). The population on Mar. 31, 1942, was estimated at 1,634,338 (93,680 Maoris), as compared with 1,491,484 (82,326 Maoris) at the 1936 census. The Union Islands have an area of 4 square miles and a population of 1,297; the Ross Dependency, no reported definite area or resident population. Living births among the white population of New Zealand proper in 1941 numbered 35,100 (22.8 per 1,000); deaths, 15,146 (9.8 per 1,000); marriages, 13,313 (8.65 per 1,000). Excluding troop movements, there were 7,102 arrivals and 6,903 departures from New Zealand ports during the year ended Mar. 31, 1942. Estimated populations of the chief cities (including Maoris) as of Apr. 1, 1941, were: Auckland, 223,700; Wellington, 160,500; Christchurch, 135,500; Dunedin, 82,200; Invercargil, 26,400; Wanganui, 26,000; Palmerston North, 25,500; Hamilton, 20,900.

Education and Religion. Primary education is free and compulsory. As of Jan. 1, 1941, there were 2,204 public primary schools, with 203,951 pupils; 306 private primary schools, with 28,454 pupils; 146 native village schools, with 10,730 pupils; 234 secondary and technical schools of all kinds, with 36,590 students; and four colleges at Dunedin, Christchurch, Auckland, and Wellington, forming the University of New Zealand, with a total of 5,528 students in 1940. According to the 1936 census, 40.28 per cent of the population belonged to the Church of England, 24.66 per cent were Presbyterians, 13.09 per cent Roman Catholics, and 8.11 per cent Methodists.

Production. The economic system rests upon the production of agricultural and animal products for export, but manufacturing is rapidly expanding.

Livestock on Jan. 31, 1942, included 34,505,290 sheep and lambs, 4,447,160 cattle, 1,714,859 milch cows, 603,876 pigs, and 236,451 horses. Animal products exported during 1942 included: Butter, 2,344,029 cwt.; cheese, 2,689,232 cwt.; beef, 803,553 cwt.; mutton, 693,077 cwt.; lamb, 3,638,381 cwt.; pork, 270,415 cwt.; potted and canned meat, 326,142 cwt.; wool, 934,230 bales. Crop yields for the 1942-43 season were: Wheat, 9,821,718 bu.; oats, 3,023,658 bu.; barley, 1,057,678 bu.; tobacco, 2,721,539 lb. in 1941-42.

Coal output in 1942 was 1,174,725 tons, excluding 276,045 tons of lignite and 1,229,271 tons of brown coal. Production of other minerals (1942): Iron ore, 2,433 tons; asbestos, 42 tons; manganese ore, 321 tons; platinum, 21 oz.; tungsten ore, 67 tons; antimony, 17 tons in 1941. For the year ended Mar. 31, 1942, there were 6,867 manufacturing establishments employing 117,214 persons (82,042 males and 35,172 females). The value of their output was £155,566,195, of which £53,305,335 was added in the process of production.

Overseas Trade. In the calendar year 1942 imports totaled £53,670,000 (£49,167,000 in 1941) and exports £80,875,000 (£67,479,000 in 1941). Values of the chief exports in 1942 were: Butter £15,777,864; wool, £12,613,062; frozen lamb, £10,965,186; cheese, £9,833,861. The principal imports were mineral and vegetable oils, cotton piece goods, machinery, tea, sugar, motor vehicles, etc. For the year ended Mar. 31, 1941, the United Kingdom supplied 46.2 per cent of the imports by value and took 84 per cent of the exports; Australia, 16.3 and 3.2 per cent, respectively; United States, 13.4 and 3 per cent. All figures are in New Zealand pounds.

Finance. For the fiscal year ended Mar. 31, 1943, actual Consolidated Fund (nonwar) revenues totaled £42,361,000 (£36,196,000 from taxation) and expenditures £38,206,000 (including £1,500,000 transferred to the War Expenses Account). In the War Expenses Account, revenues totaled £153,490,000 (taxes, £39,556,000; loans, £78,041,000; other sources, £35,893,000) and expenditures were £143,939,000, leaving a balance on hand Mar. 31, 1943, of £9,551,000. In the separate Social Security Fund, receipts totaled £19,037,000 (including the balance of £3,024,000 from the previous year) and expenditures £15,951,000. The gross public debt rose from £304,000,000 on Mar. 31, 1939, to £463,825,372 on Mar. 31, 1943. The New Zealand pound exchanged at an average of \$3.228 in 1942.

Transportation. In 1941 there were about 3,390 miles of state railways and 198 miles of privately owned lines. Highways extended 87,760 miles in 1940. Internal air lines, with nearly 2,000 miles of routes, carried 39,529 passengers, 159,129 lb. of mail, and 189,061 lb. of freight in the year ended June 30, 1942. Overseas air lines connected New Zealand with Australia and the United States. As of Jan. 1, 1941, the New Zealand merchant marine consisted of 496 vessels of 98,789 net tons.

Government. Executive power is vested in a Governor General, appointed by the Crown for five years on recommendation of the Dominion Government. Legislative power rests with the Governor General and a Parliament of two chambers—the Legislative Council with an indeterminate number of members (36 in 1943) appointed by the Governor General for seven years, and the House of Representatives of 80 members, elected by general male and female suffrage for three years. The Governor General delegates his executive powers to a Cabinet responsible to the House

of Representatives. Sir Cyril L. N. Newall, former Chief of Staff of the Royal Air Force, was sworn in as Governor General Feb. 22, 1941. The standing of the parties in the House of Representatives following the general election of Sept. 25, 1943, was as follows (with the previous standings in parentheses): Labor, 45 (51); National, 34 (25); Independents, 1 (2); Democratic Labor, 0 (2). The Labor party had been in control of the Government since Dec. 5, 1935. Prime Minister in 1943, Peter Fraser (appointed Apr. 30, 1940). For war declarations, see table under WORLD WAR. For the events of 1943, see below.

HISTORY

The tide of Japanese aggression that had threatened to overwhelm New Zealand in 1942 was definitely repelled in 1943, thanks in large part to powerful aid from the United States. Nevertheless the sturdy little island Commonwealth continued to pull its full weight in the United Nations war effort. Mobilization of both manpower and material resources for war reached their maximum capacity, relieving the strain on American shipping and armed forces in the South Pacific to an appreciable extent. The Labor Government, returned to power in a close general election, tightened New Zealand's relations with the United States and at the same time moved toward more intimate long-range collaboration with the sister Dominion of Australia. It also proceeded with its program of progressive socialization of New Zealand's economy, while striving to hold in check the inflationary and disruptive economic forces unleashed by the war.

Conscription Extended. Continuing the drafting of new classes for military and labor service, the Government on February 17 ordered girls between 18 and 20 to register for "nationally important work." The Government further extended its war powers early in May by requiring nonmobilized men of 21 to 41 years of age, classified as medically fit for armed service, to train for fixed periods every month. Lieut. Gen. Edward Puttick, commander of New Zealand's army, explained that new training cadres were being established to provide replacements for overseas forces.

In line with the growing role of air power in the Pacific war, the Government placed growing stress upon expansion of the air force. Reorganization of the air training system for youths was announced in August and for the first time the Dominion began drafting men for air force ground crews. New Zealand air squadrons took an increasing part in the offensives waged by Admiral Halsey's South Pacific Command and New Zealand troops also went into action in the Solomon Islands.

Meanwhile the one New Zealand division in Gen. Bernard Montgomery's British Eighth Army made an important contribution to the victory in Tunisia. Lieut. Gen. Sir Bernard G. Freyberg, New Zealand commander under Montgomery, returned to Wellington in June and presented a report to Parliament behind closed doors. Parliament then approved a resolution affirming faith in his leadership. New Zealand army casualties up to Mar. 31, 1943, were 20,878, including 3,471 dead and 7,745 prisoners.

Mobilization Reaches Peak. As the Japanese threat waned, the Government beginning in February began to shift a portion of the men in the armed services to work in war industries. It was announced in September that at the peak of military mobilization, there were 573,000 men and women

in the various defense units, or one-third of the total population. An important new war industry developed during the year was the production of minesweepers, barges, and other small craft for the U.S. Navy in the South Pacific. The growing inadequacy of housing facilities in Auckland and Wellington led the Government to begin construction of 1,200 houses in those areas. In mid-August the Ministry of Industries and Commerce announced a switchover of industry to meet civil shortages of textiles, clothing, and shoes. Another new industrial development was the opening of plants for the dehydration of meat and vegetables.

Economic Controls. The price stabilization plan put into operation in December, 1942 (see 1943 YEAR BOOK) was successful in holding prices of essential foodstuffs at prewar levels, according to a statement by the Minister of Supply on July 17. On August 5 the Government moved to stabilize prices of all house and farm properties by introducing a measure establishing land sales courts and committees for the control of sales and leases. Farm lands were to be held at prices equivalent to their production value. The attempt to fix prices at retail and not wholesale levels caused beef wholesale prices to soar to 50 per cent above retail prices in December.

Purchase of new coal mines by the State was revealed February 12. Plans for the further extension of State medicine were announced at the end of June; the program included the establishment of health clinics, of a home nursing service, and of a domestic aid service. The bill for the control of land prices was passed August 21 after a bitter Parliamentary struggle in which farmers and commercial groups joined in opposing the measure. They charged the Government with using the need for postwar land settlement of soldiers to cloak nationalization of the land.

On October 18 the War Cabinet approved a 10-year program for the development of hydroelectric power at a cost of some \$100,000,000. Early in December it approved a rest period of five days with pay for all workers not entitled to paid annual vacations. This move was presented as a first step toward the redistribution of the national income and socialization of industry. The Employers Federation charged that the measure violated the Government's program for stabilizing living costs.

Political Events. State control of the economic system was at issue in the general election held September 25. The Labor Government was returned to power with a considerably reduced majority (see above under *Government*). Opposition gains resulted in part from the new program published by the Conservative National party on August 31. It called for expanded government housing and social security; determination of ceiling prices for farm products by farmers instead of by the Government; and producer control of marketing. The party also promised to end Government control of currency and radio broadcasting, to institute nonpolitical direction of transport, to promote protection and expansion of manufacturing, and to press for large-scale postwar development plans.

Final returns on the general election, published in December, indicated that only the soldier vote saved the Labor party's parliamentary majority, and that among soldier voters Labor won a majority of only 3,000. In fact, out of every 100 voters in New Zealand as a whole, 52 voted against the Government. This result led Opposition leaders to renew their demand for the establishment of a national union government containing representatives

of all parties. However Prime Minister Fraser again spurned the proposal.

The Fraser Government lost one of its strongest members with the death on May 27 of former Prime Minister Joseph G. Coates, the Minister of Armed Forces and War Coordination. The Prime Minister on July 8 announced the impending appointment of Maj. C. F. Skinner as full-time Minister of Rehabilitation.

Relations with United States. Official and unofficial relations between the United States and New Zealand remained on an extremely friendly basis throughout 1943. Mrs. Franklin D. Roosevelt, visiting the islands in August at the invitation of the Dominion Government, received a cordial welcome. American and New Zealand armed forces got on well together in the Solomons and the Fiji area. Some uneasiness was manifested in New Zealand over the future implications of U.S. lend-lease. The Opposition leader, Sidney G. Holland, declared on December 4 that lend-lease arrangements should be more clearly defined so that the Dominion might know whether or not it would have to repay the final balance. The Minister of Supply indicated in April that New Zealand would furnish reciprocal aid to the United States valued at some \$33,000,000 in 1943, but the balance was still in New Zealand's favor at the year's end.

Australian Collaboration. Shortly after the announcement of an Australian-New Zealand mutual aid agreement in the event of future attack (see AUSTRALIA under *History*), Prime Minister Fraser on February 27 appointed Carl A. Berensen as the Dominion's first High Commissioner to Australia.

See CHEMISTRY under *Foreign*; LEND-LEASE PROGRAM; SOCIALISM; WORLD WAR.

NHA. See NATIONAL HOUSING AGENCY.

NICARAGUA. The largest in area of the Central American republics. Capital, Managua.

Area and Population. Area, 57,143 square miles (including 3,475 sq. mi. of lakes). Population on Jan. 1, 1942, 1,013,946. The people are mainly of Spanish, Indian, or mixed blood, but there is a considerable infusion of West Indian Negroes on the east coast. Chief cities (1942 estimate): Managua, 118,857; León, 47,871; Matagalpa, 46,128; Granada, 34,735; Masaya, 30,372; Chinandega, 18,000; Bluefields, 10,000.

Defense. On Jan. 1, 1941, there was a total of 4,118 men in the land and air forces (3,481 active; 637 trained reserves), including 44 in the active air force. The navy comprised a small number of coastal patrol boats. A military academy was established in 1940 with a United States army officer as director. See *History*.

Education and Religion. About 60 per cent of all adults are illiterate. In 1940 there were 744 State elementary schools, 2 normal, 18 secondary, 5 professional, 408 mixed (urban and rural), and 233 other schools. In addition, there were 3 universities and a military school. Roman Catholicism is the principal religion but other faiths have religious freedom.

Production. Coffee-raising is the principal industry, but gold replaced coffee as the leading export beginning in 1939. Gold accounted for 61.4 per cent of all 1941 exports (8.4 per cent in 1932). Coffee exports in 1941 were 12,667,512 kilos; gold, 6,514 kilos. Bananas, cabinet wood, cotton, hides and skins, live cattle, rice and sesame are other exports. Beans, rice, corn, and sugar are the main food crops, and sugar refining is the leading manufacturing industry. Cocoa beans, plantains, tobacco,

and yucca also are grown. There are numerous coffee-cleaning establishments.

Foreign Trade. Imports in 1942 were valued at \$6,772,000 (\$10,438,000 in 1941); exports, \$14,327,000 (\$11,931,000 in 1941). The export surplus was \$7,555,000 in 1942 (\$1,493,000 in 1941). The United States supplied 87.6 per cent of the 1941 imports (84 in 1940) and took 96 per cent of the exports (94.2 in 1940). Values of the chief 1941 exports: Gold, \$7,323,265; coffee, \$2,575,688; cabinet wood, \$390,885. Leading imports were machinery and apparatus, cotton manufactures, iron and steel manufactures, oils, chemicals, and food products.

Finance. Budget estimates for 1941-42 anticipated revenues of 33,941,000 cordobas and expenditures of 31,941,000. The public debt on Dec. 31, 1941, totaled 29,313,082 cordobas, including guaranteed internal and external consolidated bonds of 9,889,812 cordobas and a U.S. Export-Import Bank used credit equivalent to 11,879,270 cordobas. Official exchange rate of the paper cordoba: \$0.20; curb rate, \$0.1572 in 1940 and \$0.1686 in 1941. Note circulation increased from 12,048,335 cordobas on Dec. 31, 1939 to 23,132,833 cordobas on Dec. 31, 1942.

Transportation. Nicaragua in 1943 had about 240 miles of railway line, all Government-owned; over 1,600 miles of roads; and air services of the Pan American and TACA systems connecting Managua with the chief cities of the hemisphere and with the principal Nicaraguan towns. See *History* for 1943 highway developments. During 1941 a total of 1,732 passengers arrived in Nicaragua by Pan American planes and 1,733 departed, while TACA planes carried 6,949 passengers within the republic and 1,199 to points outside. Chief ports: Corinto and San Juan del Sur on the Pacific; Bluefields, Cabo Gracias, Puerto Cabezas, and San Juan del Norte on the Caribbean.

Government. The Constitution of Mar. 22, 1939, vested executive powers in a President elected for six years and legislative powers in a parliament of two chambers—a Senate of 15 elected members with all ex-Presidents serving *ex officio*, and a Chamber of Deputies of 42 elected members. The terms of Senators and Deputies is six years. President in 1943, Gen. Anastasio Somoza. He assumed office Jan. 1, 1937, for a four-year term, was re-elected by a Constituent Assembly Mar. 23, 1939, and inaugurated for an eight-year term Mar. 30, 1939. For war declarations, see table under WORLD WAR. For developments during 1943, see below.

History. The close collaboration between the Nicaraguan and United States Governments was continued throughout 1943 with resultant benefits to both countries. In his annual message to Congress on April 15, President Somoza revealed that his Government had put at the temporary disposal of the United States a zone around the port of Corinto which was rapidly being converted into a military base for the defense of Nicaragua and all Central America. Lieut. Gen. George H. Brett, chief of the U.S. Caribbean Defense Command, visited Managua on August 17 to inaugurate new barracks for American forces stationed there. Nicaragua celebrated the Fourth of July as a national holiday, marked by a special session of Congress to honor the United States, and the Nicaraguan press later supported Washington in pressing Argentina to fulfill its obligations under inter-American defense agreements.

The economic accords concluded with the United States in 1942 (see 1943 YEAR BOOK) helped to bring Nicaragua a high degree of pros-

perity. The most important contributing cause was the flow of U.S. funds into the country in connection with work on highway projects. In May more than 10,000 men were employed on the Pan American Highway and the Atlantic Coast road. In addition, the export of crude rubber reached a new high and brought nearly \$1,000,000 into the republic during the year ended May 31, 1943. Crude rubber exports from wild trees were 485 tons in 1942 against 55 tons in 1941. The U.S.—Nicaraguan plantation rubber investigations accord of Jan. 11, 1941, was extended indefinitely by an exchange of notes in June, 1943. Reviewing the progress made by the Inter-American Cooperative Service for Public Health in Nicaragua, the President in his message of April 15 announced plans for the establishment of a new school for nurses with U.S. financial and technical aid. In May the respective legations of the United States and Nicaragua were raised to embassy rank.

High budget receipts enabled the Government to increase the 1943-44 defense budget by 25 per cent over 1942-43. They also permitted payment by the Collector General of Customs on June 30 of \$500,000 on the frozen commercial debt of Nicaragua. President Somoza in the same month ordered the Collector General to redeem the entire frozen commercial debt notes issued in 1938 and the 5 per cent customs bonds issued in 1918. These obligations were due to mature in 1945 and 1953 respectively. On August 6 Congress authorized the expropriation of the funds, property, and real estate (except houses actually lived in) of nationals of Axis powers. Defense bonds issued to cover the value of the expropriated properties were to be held in trust until after the war.

The economic boom brought a marked increase in the cost of living. Food prices doubled and imported articles were scarce and high priced. The Price Control Commission fixed maximum rents in May and attempted to prevent further price rises by heavy fines on offending storekeepers, but without conspicuous success.

There were few noteworthy political developments. On April 16 Gen. José María Moncada, former President, was elected President of the Senate and Aurelio Montenegro President of the Chamber of Deputies. A project for reform of the Constitution was submitted to the President by Congress early in June. Changes in a number of the higher military posts were announced by the President March 6, including the appointment of Col. Julio Somoza as chief of the Presidential guard. At the same time the President condemned alleged efforts by the Conservatives to arouse political disputes in preparation for the next Presidential election, which was not due until 1946.

The Chamber of Deputies on June 9 approved a bill revising the immigration law to place Chinese on the same basis as Europeans. See ARCHAEOLOGY; SPANISH-AMERICAN LITERATURES; WORLD WAR.

NICKEL. Although 1943 nickel production exceeded the all-time high of the previous year, this metal in December remained the only major member of the ferro-alloy group whose supplies were listed by the War Production Board as "insufficient for war plus essential industrial demands under existing administrative control."

Production in Canada's Sudbury, Ontario, district where most of the world's nickel is mined, was handicapped by the same acute labor shortage which plagued American mines, and in the latter part of the year tonnage dropped 10 per cent below its peak. The International Nickel Co. of

Canada, Ltd., which had expanded its production capacity by 50 million lb. annually over 1940, was unable to use these expanded facilities to the utmost. Canadian production was buttressed to a small extent by nickel from New Caledonia and Cuba, where a plant to treat low-grade ores came into production.

Consumption of nickel by the United Nations in 1943 was estimated to be nearly double that used by those countries in the prewar peak year. Steel mills in the United States, England, and Canada took over 70 per cent of the new nickel made available to those countries. Replacement of steels containing high percentages of alloying elements by the low alloy National Emergency Steels in the United States for from 30 to 45 per cent of total alloy steel production in that country was a major factor in keeping demand from exceeding supply by too great a margin. The NE steels were estimated to have saved 24,000 tons of nickel, somewhat less than originally anticipated. For many uses there was considerable question as to whether consumers would return to high alloy steels after the war. Slightly more than one-half of the nickel being melted by steel mills at the end of the year was in the form of scrap, which was abundant, thus further cutting the need for primary nickel.

Early in 1944, it appeared that the nickel situation was easing. Raising of restrictions on other alloys which might be substituted for nickel, took the pressure off that metal and it was predicted that relaxation upon nickel for civilian requirements might come before long. A possible omen of such action was the War Production Board's action making chrome and nickel available for truck engine valves.

Base prices, f.o.b. refinery, including duty, remained frozen at 35 cents per lb. for electrolytic cathode sheets, 99.95 per cent pure, 36 cents per lb. for ingot or shot produced from electrolytic cathodes, and 34 cents per lb. for "F" nickel shot or ingot for addition to cast iron.

CHARLES T. POST.

NIGER. See FRENCH WEST AFRICA.

NIGERIA. A British possession in West Africa, comprising the colony (1,381 sq. mi., pop. 331,544) and the protectorate which includes British Cameroons (q.v.). Total area, 372,599 square miles. Total population (1941), 21,040,720. Chief towns: Lagos, the capital, 167,000 inhabitants in 1939; Ibadan, including farming suburbs, 318,320; Kano, 80,634; Abeokuta, 69,500; Ogbomosho, 64,680; Oyo, 63,170. Education (1939): 40,763 schools and 543,618 students.

Production and Trade. The chief agricultural products, with 1942 export figures in long tons, are palm oil (151,290), palm kernels (356,590), cotton lint (18,522), rubber (6,668), groundnuts (196,281), cocoa, tobacco, maize, ginger, sesamum, and rice. Minerals produced included gold, tin, silver, and coal. Deposits of manganese, galena, lignite, columbite, wolfram, and monazite have been found. Other products are gum arabic, mahogany, ghee, hides and skins (7,283 long tons exported in 1942). Livestock (1938): 2,936,000 cattle, 2,188,000 sheep, 5,630,000 goats, 476,000 asses, 173,000 horses, 168,000 swine, 2,000 camels. Trade (1942): imports were valued at £10,400,000; exports, £9,000,000 (palm kernels £2,557,123, groundnuts £1,706,424, palm oil £1,426,348, cotton lint £1,123,726, rubber £673,467, hides and skins £649,601).

Transportation. Railways (1940): 2,341 miles. Roads (1940): 21,277 miles. Nigeria is now linked with French North Africa by the 2,000 mile Trans-Saharan highway, and with the Anglo-Egyptian Sudan and Kenya. Lagos is an important base for the air communications of the British Empire, and is a link in Pan American Airways' ferry and transport services between the United States, the Belgian Congo, and the Middle East. Kano in northern Nigeria is an important trading center and a focal point for road, rail, and air transport.

Government. The budget estimates for 1942-43 anticipated a deficit of £7,850. Public debt (Mar. 31, 1940), £24,936,599. Nigeria, including the British Cameroons attached to the Protectorate for administrative purposes, is under the control of a governor, assisted by an executive council. There is a legislative council for the Colony and the Southern Provinces of the protectorate. The Governor enacts the laws affecting the Northern Provinces. Governor and Commander in Chief, Sir Arthur Richards (appointed during June, 1943).

NIGHTINGALE ISLAND. See ST. HELENA.

NITROGEN. See CHEMISTRY under *Fertilizer*.

NLRB. See NATIONAL LABOR RELATIONS BOARD.

NON-FEDERATED MALAY STATES. Same as Unfederated Malay States. See under BRITISH MALAYA.

NOREPOL. See RUBBER.

NORFOLK ISLAND. An Australian-owned island in the South Pacific, lying 930 miles northeast of Sydney and 630 miles northwest of Auckland, N.Z. Area, 8,528 acres. Population, 896 on June 30, 1940. Bananas, citrus and other fruits, beans, and fish are the principal products. The territory is governed by an administrator appointed by the Prime Minister of Australia. An advisory council of eight elected members was established in 1935.

NORTH AFRICAN CAMPAIGN. See MILITARY PROGRESS; UNITED STATES under *Foreign Relations*; WORLD WAR; ALGERIA, EGYPT, LIBYA, MOROCCO, and TUNISIA, under *History*.

NORTH AFRICAN ECONOMIC BOARD. See ALGERIA and TUNISIA under *History*.

NORTH AMERICA. Excluding Mexico and Central America, but including Greenland, Newfoundland, and smaller adjacent islands, the continent has an area of about 7,589,532 square miles and a population estimated at 143,175,000 on Jan. 1, 1940. The combined area of Mexico, Central America, and the West Indian islands was about 1,073,080 square miles and the population about 40,870,000. See separate articles on the constituent countries and territories.

NORTH AMERICAN B-25 AND P-51. See AERONAUTICS under *Types*.

NORTH CAROLINA. A south Atlantic State. Area: 52,712 sq. mi. Population: 3,571,623 (1940 census); 3,404,194 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is J. Melville Broughton (Dem.), inaugurated in January, 1941, for a four-year term; Lieutenant Governor, R. L. Harris; Secretary of State, Thad Eure; Attorney General, Harry McMullan. See FLOODS; Music under *Orchestras*.

NORTH DAKOTA. A west north Central State. Area: 70,665 sq. mi. Population: 641,935 (1940 census); 536,510 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is John Moses (Dem.), inaugurated in January, 1943, for his third two-year term; Lieutenant Governor, Henry Holt; Secretary of State, Thomas Hall; Attorney General, Alvin C. Strutz.

NORTH EAST NEW GUINEA. See NEW GUINEA, TERRITORY OF.

NORTHERN RHODESIA. See RHODESIA, NORTHERN.

NORTHERN TERRITORY. See AUSTRALIA under *Area and Population*.

NORTHWEST TERRITORIES. The northern areas of Canada, extending north from the provinces and the Yukon to the North Pole. It is divided, for administrative purposes, into the districts of Franklin (554,032 sq. mi.), Keewatin (228,160 sq. mi.), and Mackenzie (527,490 sq. mi.). Area, 1,309,682 square miles, including 51,465 square miles of fresh water. Population (1941 census), 12,028 (6,700 male; 5,328 female).

Production, etc. Mining, fur trapping, and reindeer herding are the principal occupations of the inhabitants. The original herd of 2,370 reindeer from Alaska, delivered in 1935, had increased to 10,000 by 1944. Mineral output (1942) was valued at \$5,223,079, of which gold (97,039 fine oz.) accounted for \$3,736,002. Petroleum, radium, uranium, and silver are produced. Lead, zinc, nickel, copper, coal, and sheelite (a tungsten ore) have been found. Furs (1941-42): 445,336 pelts valued at \$2,513,750. For the "Canol" project see YUKON under *History*. In the fiscal year, 1942-43, revenue and expenditure totaled \$225,335 and \$1,153,963, respectively.

Government. A territorial council, consisting of a commissioner, deputy commissioner, and 5 councilors appointed by the governor general in council, controls the administration of the territories. The seat of government is at Ottawa, Ontario. Commissioner, Charles Camsell. See CANADA under *Relations with United States*.

NO-STRIKE AGREEMENT. See LABOR CONDITIONS; NATIONAL WAR LABOR BOARD.

NORWAY. A European kingdom occupying the western and northern part of the Scandinavian peninsula; occupied by German armed forces beginning Apr. 9, 1940. Norway held sovereignty over Svalbard (Spitsbergen and adjacent islands) in the Arctic Sea, 240 miles distant from the Norwegian coast (see SVALBARD); also Norway asserted sovereignty over Jan Mayen Island in the Arctic Sea, uninhabited, and certain uninhabited areas in the Antarctic region. Capital, Oslo.

Area and Population. Covering an area of 124,556 square miles (land area, 119,148 square miles), Norway proper had 2,952,000 inhabitants on Jan. 1, 1941, by official estimate; by latest census, 2,814,194 in 1930. Only 28 per cent of the population of 1930 were classed as urban, and females exceeded males by about 71,000. According to a Stockholm report, there were 250,000 German soldiers and more than 300,000 German civilians in Norway in August, 1942. The birth rate, per 1,000, was 16.3 for 1940 (15.9 for 1939); death rate, 10.7 (10.2). Populations of chief cities: Oslo, 275,000 in 1938; Bergen, 106,500 in 1938; Trondheim, 54,458 in 1930; Stavanger, 46,780 in 1930.

Education and Religion. Primary education is compulsory and literacy is virtually universal. In the academic year 1937-38 there were 352,992 pupils in elementary schools and 33,792 in secondary schools. The University of Oslo had 4,118 students in 1939.

The Evangelical Lutheran Church was politically established. All religions were tolerated (but not the Jesuit order). Apart from Evangelical Lutherans, persons reporting religious affiliation in 1930 numbered 91,459: among them, 12,207 Methodists, 7,788 Baptists, 3,325 Adventists, and 2,827 Roman Catholics. After the German occupation, unremitting attempts were made to reorganize schools and churches in accordance with Nazi principles. See *History* below.

Production. In normal times 29 per cent of the workers followed agriculture or forestry, 27 industry, 10 commerce, 9 transportation, 7 fishing and whaling, 5 professions and public administration. Under German rule, all economic resources and productive facilities were coordinated as far as possible with the requirements of the Nazi war machine. Production of the chief crops in 1940, with 1939 figures in parentheses, was (in metric tons): Wheat, 70,700 (77,800); barley, 91,400 (103,500); rye, 5,700 (6,200); oats, 161,200 (200,800); potatoes, 1,250,000 in 1942. The fish catch for 1940 was reported at 1,070,000 metric tons (1,030,000 in 1939). The estimated livestock population in 1943, with prewar figures in parentheses, was: Milch cows, 800,000 (860,000); young cattle, 400,000 (550,000); swine, 200,000 (360,000); poultry, 1,000,000 (3,250,000). The value of ore production in 1939 was 56,500,000 kroner, with pyrites and iron ore accounting for 81 per cent of the total. Estimated mineral and metallurgical production in 1940 was (in metric tons): Iron ore, 1,500,000; pig iron, 175,000; tungsten, 20; nickel, 1,250; copper, 20,000; zinc, 5,000; lead, 320; aluminum, 15,000; molybdenum, 600. The merchant fleet's earnings in 1939 were estimated at about 800,000,000 kroner. Manufacturing is confined chiefly to the processing of wood, fish, minerals, and other Norwegian products.

Foreign Trade. Imports in 1941 were reported at 888,000,000 kroner (944,800,000 in 1940); exports of Norwegian products at 446,000,000 kroner (611,800,000 in 1940). After the German occupation, trade was entirely with Germany and Axis-controlled Europe except for trade with Sweden.

Finance. For the fiscal year ended June 30, 1941, estimates for the combined current and capital budgets balanced at 826,300,000 kroner as against 664,900,000 kroner in 1939-40. In addition to this budget, the Germans levied upon Norway the cost of the German military occupation and civil administration. This bill, estimated at from 1.9 to 2.4 billion kroner annually, was met mainly by the Bank of Norway, which advanced some 4 billion kroner between April, 1940, and August, 1942. In addition, other Norwegian banks had been compelled to accept nearly 800,000,000 kroner of German treasury notes in exchange for ready cash. The German occupational authorities fixed the value of the reichsmark at 1.67 kroner, an overvaluation of 34 per cent above the previous effective rate (1.24 kroner equals 1 reichsmark).

The budget of the Norwegian Government in London for 1941-42 amounted to about £13,000,000, over half of which was for defense. Receipts came from the income of the Norwegian merchant marine and other Norwegian assets.

Transportation. Prior to the German occupation, Norway had about 2,500 miles of railway lines in operation, practically all of which were state-owned. Another line, Grong to Mosjoen (122 miles), was opened after the occupation. Paved highways, totaling 25,699 miles in 1939, were extended by the Germans. An all-weather express highway from Oslo to Bergen was completed early in 1941, and other important roads including one from Trondheim northward to Narvik, were under construction. The Norwegian civil airways were linked with the German network following the military occupation.

Shipping. The Norwegian merchant fleet on Jan. 1, 1940, was the fourth largest in the world, comprising 4,391 steam, motor, and sailing vessels aggregating 4,846,000 gross tons. Eighty per cent of this tonnage, manned by 25,000 sailors, escaped when the Germans seized Norway; it was immediately requisitioned by the Norwegian Government and operated on behalf of the United Nations by the Norwegian Shipping and Trade Mission.

Government. Under the Constitution of 1814, as subsequently amended, executive power is vested in the King, acting through a Cabinet responsible to the Storting (parliament). The Storting consisted of 150 members elected for four years by universal suffrage. It divided itself into two sections of 38 and 114 members, called the Lagting and Odelsting, respectively. The composition of the Storting elected in October, 1936, was: Labor, 70; Conservatives, 36; Liberals, 23; Agrarians, 18; others, 3. The elections scheduled for 1940 were not held because of the German invasion of Norway on Apr. 9, 1940. King in 1943, Haakon VII, who was born in 1872 and was elected to the throne by the Storting Nov. 18, 1905. Premier, Johan Nygaardsvold (Labor party), heading a coalition government formed in June, 1940. For the dissolution of the Storting and the withdrawal of the Norwegian Government to London in 1940, see 1941 YEAR BOOK. For its war declarations, see table under WORLD WAR.

The German administration of occupied Norway was headed by Josef Terboven, the Reich Commissioner in charge of civil affairs (appointed by Hitler Apr. 24, 1940), and Col. Gen. Nikolaus von Falkenhorst, the military commander. On Sept. 25, 1940, Herr Terboven appointed a State Council (Statsraad) of 13 Norwegian Nazis or sympathizers, and a legislature (Riksting) to take over the functions of the Storting. On the same day Terboven decreed the abolition of the monarchy

and Storting, the dismissal of the Nygaardsvold Government, and the dissolution of all political parties except Maj. Vidkun Quisling's pro-Nazi National Union (Nasjonal Samling), which in the 1936 elections had failed to win any seats in the Storting. Quisling was appointed chairman of the State Council and later (Feb. 1, 1942) was proclaimed Minister President, or Premier, of Norway. He remained subject to the orders of Reich Commissioner Terboven. With the assistance of Quisling and his Norwegian Nazi followers, Terboven undertook to Nazify all aspects of Norwegian life (see 1941, 1942, and 1943 YEAR BOOKS, and *History* below for developments during 1943).

HISTORY

As in the other occupied countries of Europe, events in Norway moved toward a climatic explosion during 1943. Forced increasingly upon the defensive in the World War, the Germans and their Norwegian Nazi collaborators intensified both their defensive preparations, their ruthless exploitation of Norwegian manpower and resources, and their efforts to root out all opposition. Norwegian patriots, encouraged by the prospect of early liberation, stiffened their resistance and prepared for the ultimate reckoning with their oppressors.

Dissension among Quislings. Following upon reports of dissensions among Quisling's followers, the Norwegian Fuehrer was reported late in February to be carrying out a systematic purge of unreliable elements within the Nazi party. Soon afterward it was announced that the Quislingists were organizing in special fighting groups to help the Germans combat an internal uprising. A number of Nazis not enrolled in the Quisling military formations appealed to local German commanders for arms to defend themselves against patriot attacks. A growing number of Quisling's followers were reported later in the year to be finding excuses to resign.

On April 19 Quisling and Josef Terboven, Reich Commissioner for Norway, had an important conference with Hitler and Reich Minister Heinrich Himmler, head of the Gestapo and Elite Guard, at Hitler's headquarters. The conference was followed by more drastic repressive measures in Norway (see below) that spurred patriot resistance and aroused further dissension among the Norwegian Nazis. A number of Quisling's Cabinet Ministers were reported to have offered their resignations in September in protest against his decree of August 14 declaring a state of emergency. This decree, they declared, indicated that Hitler still considered Germany at war with Norway. A statement by Hitler broadcast on September 27 appeared designed to allay the unrest among Norwegian Nazis.

"It is the unchangeable will of the Fuehrer," the statement read, "that after the victorious conclusion of this fateful struggle, a nationalist and socialist Norway should arise in liberty and independence, surrendering on the higher plane of the European community only those functions that are essential for the security of Europe for all time . . ."

German Morale Slumps. Among the German occupational forces and civilian officials of the Terboven administration there were likewise reports of falling morale, necessitating drastic disciplinary measures. Eighteen Germans, including several officers, reportedly were executed at Kristiansand in January for seeking to escape and "cooperating with the enemy." In May Swedish sources reported widespread refusals by German soldiers in Norway to serve on the Russian front. The growing number

of German officers and soldiers deserting and fleeing to Sweden led Col. Gen. Nikolaus von Falkenhorst, the German commander in chief in Norway, to issue an appeal to the sense of honor and duty of his troops in July. At the same time he attacked the Swedish Government for harboring the deserters.

Labor Draft Extended. These signs of weakness and fear within the German and Quisling ranks were accompanied by more desperate and drastic measures of repression. Another round-up of Norwegian patriots, including many members of the banned Communist and Labor parties, was followed by Premier Quisling's announcement on February 22 that men between the ages of 18 and 55 and women between 21 and 40 would be drafted for any sort of labor service the authorities might designate. The move was in line with the previous extension of manpower mobilization in Germany (q.v.).

The Quisling and German authorities began immediately to call up additional workers for construction gangs engaged in building defenses against a threatened Allied invasion. However the underground launched a campaign to sabotage the labor conscription program, which met with considerable success. According to a Nazi-controlled Oslo news agency report of June 12, only 25 per cent of the persons called up had reported for service. This was in spite of a decree of March 26 withholding food ration cards from men between 18 and 57 years of age who had not registered for the "National Labor Service."

The Germans used the new labor law to get rid of "undesirable elements" in the population, particularly anti-Nazi clergymen, newspapermen, teachers, and other intellectuals. They also drafted considerable numbers of girls. The German radio reported May 23 that 4,000 Norwegian girls had been summoned for labor service during the previous four days, and that in all 66 women's labor corps were in operation. Meanwhile the age limit for girls subject to labor conscription had been reduced from 21 to 18 years of age.

Exploitation of Industries. Norway's industries and economic resources also came under an increased measure of German control. Early in March decrees were issued giving the Quisling administration's Department of Trade control over all industries, with authority to liquidate or concentrate them in accordance with the needs of Germany's war economy. They called for the compulsory organization of business men and industrialists in groups, each group being directed by a leader with dictatorial powers appointed by the Quisling regime. This system was resorted to when Terboven failed in his efforts to enlist the cooperation of the Federation of Norwegian Industry, which was then dissolved.

German sources later reported that the exploitation of Norwegian industry and economic resources by compulsory methods was meeting with increasing difficulties. Slowdowns by workers reduced production—by 35 per cent in one Fredrikstad factory. In Trondheim 13 out of 24 contracting firms put to work on German orders were subsequently liquidated, their properties confiscated, and their proprietors deported to the Reich. But despite the active and passive resistance they encountered, the Germans looted Norway of at least nine billion crowns (about \$2,187,500,000) during the three years ending Apr. 9, 1943, according to estimates by Norwegian experts. This represented an annual rate equivalent to three-fourths of the kingdom's national income during the pre-occupation days.

Norwegian foodstuffs not only supported the occupation forces but also played an important part in the German war economy. Of Norway's exports of some 200,000 tons of fish in 1942, about 80 per cent went to Germany and its armed forces. Moreover by the summer of 1943, the damage done to the German-occupied port of Narvik by British forces in 1940 was reported completely repaired, and a dozen ships a week were leaving the port with Swedish iron ore for German war factories. Every phase of Norwegian economic life was under rigid German control.

Conflict with Churches. Premier Quisling's effort to force the Lutheran churches into active collaboration with his Nazi regime fizzled out during 1943 (see 1943 YEAR BOOK, p. 510, for background). It was reliably reported from Norway in mid-April that only 61 of the 869 pastors of the Evangelical Lutheran State Church had accepted the Quisling regime. Twenty-five of the 61 were described as avowed Nazis and the remainder as old men.

The anti-Quisling Provisional Church Council formed in 1942 extended its struggle into 1943 with a New Year's message denouncing Nazi principles that was read in over 1,000 churches. In April the Quisling Minister of Labor submitted the names of 75 pastors and 200 theological students who had "publicly declared their solidarity with the oppositional church movement" or rejected parishes offered them by Quisling church authorities. He requested their immediate conscription for labor service. A vigorous written protest against the labor conscription program was submitted to Premier Quisling by opposition church leaders on May 11. Quisling replied by sending the head of the Provisional Church Council, Dr. Ole C. Hallesby, and his chief assistant to the Grini concentration camp.

In June a Stockholm newspaper reported that the handful of pro-Quisling clergymen, upset by popular ostracism of them and their churches, had petitioned the Premier to introduce compulsory church attendance by Quisling party members.

Battle of the Schools. The Quisling regime, with Terboven's support, also intensified its efforts to Nazify the Norwegian educational system, but met the same stubborn resistance as in 1942 (see 1943 YEAR BOOK). In January the Quisling authorities announced that Norwegian parents opposing their children's attendance at meetings of the Nazi-controlled Norwegian Youth Service would be brought before the Quisling People's Court. In February a new catechism, edited by a leading member of Quisling's Church Department, was introduced into the schools. Designed to inculcate youth with Nazi principles, it instructed the children that "before all we owe obedience to our Fuehrer and his administration. To oppose our chief and the State is against the word of God and would be followed by punishment."

The Nazi struggle to crush resistance in the University of Oslo was renewed in September when a number of professors were arrested and 40 students sent to concentration camps for six months for refusing to sign a declaration of loyalty. A fire in the assembly hall on November 27 was followed on November 30 by the closing of the university in a sudden raid by German and Quisling police. The police were ordered to arrest all students except some 300 who were Nazi party members. They seized about 1,200 students and instructors, but another 1,500 were reported to have escaped and gone into hiding. Those arrested were confined in a nearby concentration camp. Beginning December 9 many were deported to Germany, de-

spite an official protest from Sweden (q.v.) and world-wide condemnation. The students were charged with "conducting propaganda and illegal activities against Germany and the Norwegian state." During December the Nazi regime was reported extending the round-up of intellectuals to include students and professors in all Norwegian universities.

General Repression. In addition to these systematic attacks upon the churches and schools, the German and Quisling authorities resorted to measures of increasing severity in their efforts to stamp out resistance among the people at large. Trade union leaders and members of the strong Norwegian Labor party and of the less influential Communist party experienced particularly harsh treatment. The execution of 17 persons for "Communist activity" was reported late in February. The victims included Ottar Lie, Secretary of the Norwegian Communist party, and several other prominent Communist leaders.

The deportation to Germany and Poland of Norway's 1,300 Jews was virtually completed during the first quarter of 1943. The able-bodied men were reportedly put to work in the mines around Katowice, Silesia, but the others were said to be starving. In mid-March sabotage of German communication lines and ships around Trondheim led to the confinement of 300 prominent Trondheim residents in concentration camps. To check the number of Norwegians seeking refuge in Sweden and Great Britain, Reich Commissioner Terboven on May 12 decreed the death penalty for anyone attempting to escape. Properties of those seeking to escape were confiscated and anyone assisting them was likewise made subject to punishment.

An amnesty proclaimed by Premier Quisling on May 17 freed a number of Norwegian patriots imprisoned on minor charges. But the concentration camps remained full, and there was every evidence that the prisoners were subjected to all the torture and brutalities customary in German prison camps throughout Europe. Executions of new batches of Norwegians for sabotage, espionage, attempting to save the country, etc., were reported from time to time.

Martial Law Imposed. The Germans were driven to more extreme measures in mid-August. The overthrow of Mussolini on July 25 had been followed by numerous resignations of high Norwegian police officials, many of whom were then arrested by the Gestapo. Meanwhile a number of punishing raids by American Flying Fortresses on German bases in Norway had emphasized the danger of an allied invasion, and Sweden had acted to curtail the transit traffic of German supplies and soldiers to Norway.

On August 11 the Germans executed Gunnar Alifsen, head of the civilian section of the Oslo police, when he refused to detail members of his force to arrest Norwegian women who had failed to report for labor duty in German war industries. The shooting of Police Chief Alifsen was announced to a meeting of all Oslo policemen on August 16 by Jonas Lie, Police Minister in the Quisling administration, who warned that the same fate awaited all policemen disloyal to the German occupationary regime. Gen. Wilhelm Redess, German chief of the Gestapo in Norway, then insisted that all policemen sign a declaration of loyalty to the Germans on pain of death.

A decree issued by Premier Quisling on August 14 inducted into the German armed forces all members of the Norwegian police, of Quisling's

bodyguard, of the German-Norwegian Elite Guard units, and of the armed formations of the Quisling party. The entire population was made subject to the jurisdiction of special police courts, functioning behind closed doors and empowered to impose the death penalty in all cases of espionage, sabotage, or "cooperation with Germany's enemies." Police Minister Lie, a rival of Quisling, was placed in charge of the militarized Norwegian police and entrusted with the task of rooting out underground organizations and breaking up their preparations to assist an Allied invasion. Among the measures adopted to this end were two requiring all males to report for labor duty as soon as an invasion began, and providing for the immediate arrest of numerous prominent hostages who were slated for execution if the civilian population joined the invaders.

Army Officers Interned. On the eve of the police purge, the 1,500 Norwegian army officers paroled in May, 1940, after the German occupation were ordered interned in Germany on instructions from Hitler. Those officers actively collaborating with the Germans were exempted. About 500 others were believed to have escaped the German round-up, but about 1,000 officers were transported between August 15 and September 15 to a German internment camp at Schocken, Poland, according to Norwegian sources. The holding of these Norwegian hostages in Germany was believed a form of insurance against possible future Norwegian and Allied retaliation against Germans and Norwegian Nazis in Norway.

Resistance Continues. During the last half of 1943 the German terror in Norway reached a more severe stage than at any time since the occupation. The Swedish border was closed on October 27 in connection with a new nation-wide search for members of the Norwegian underground. Nevertheless sabotage continued on a major scale. The explosion of a big German ammunition dump at Tjome in Oslofjord on January 10 and the blowing up of four ships and a lighthouse in Oslo Harbor on April 28 were followed on December 19 by the detonation of a German ammunition ship being unloaded in the port of Oslo. In the latter explosion more than 100 persons, including 60 Norwegians, were reported killed and 500 houses damaged. Sabotage was suspected in most of these major disasters as well as in hundreds of less important fires, explosions, and derailments.

Despite German repression, the circulation of the Norwegian underground press continued to grow. The hand-to-hand circulation of mimeographed and other illegal publications was believed to approximate the prewar circulation of Norway's free newspapers.

Government-in-Exile. The Norwegian Government-in-Exile in London and King Haakon meanwhile continued their efforts to spur passive resistance and underground preparations in Norway. In radio broadcasts to the homeland, Government leaders repeatedly warned the Norwegian people to avoid open violence and risings against the Germans until they received the signal from London. The training of Norwegian forces in Britain to take part in the restoration of Norway's liberty proceeded along with other preparations for the Government's return home.

A decree issued January 5 deprived the estimated 30,000 Norwegian Nazis and Axis collaborators of their citizenship and right to carry on trades, businesses, and professions after the war, in addition to such penalties as might be imposed for treason. A list of about 1,000 German and Norwegian "war criminals," headed by Major Vidkun

Quisling, was made public by the Government-in-Exile on October 17. On November 6 the Government announced the appointment of Andreas Aulie as chief of Norway's police forces, with the specific task of rounding up war criminals and traitors following the kingdom's liberation.

There remained a question as to the status of the Government-in-Exile after liberation. Escaping from Norway in March, Cato Hambro, son of the former President of the Norwegian Parliament, reported Norwegian sentiment as opposed to the continuance in power of the Government-in-Exile. "The feeling is that the government of the country belongs to those who stayed," he said, but added that King Haakon remained the symbol of unity and was most popular.

In July the Norwegian Minister of Shipping announced in London that about 2,400 Norwegian seamen and 40 per cent of the prewar Norwegian merchant fleet had been lost through enemy action while in the service of the Allies. In the first World War, Norway lost about 2,000 seamen and 49 per cent of her merchant marine although remaining neutral throughout the conflict.

See **CHEMISTRY** under *Foreign*; **DENMARK** and **SWEDEN** under *History*; **NAVAL PROGRESS**; **REFUGEES**; **SOCIALISM**; **WORLD WAR**.

NOTABLE PERSONS. See **NECROLOGY** and under various subjects.

NOTATUM. See **CHEMISTRY** under *Drugs*.

NOVA SCOTIA. An eastern maritime province of Canada. Area, 21,068 square miles, including 325 square miles of fresh water. Population (1941 census), 577,962 (296,044 male; 281,918 female), comprising, by racial origin, British 445,178, French 66,260, Netherland 23,834, German 15,038, etc. Religious membership (1941 census): Roman Catholic 188,944, United Church 124,301, Anglican 103,393, Baptist 89,272, Presbyterian 47,415, Lutheran 9,104, etc. In 1942 there were 15,254 living births, 6,350 deaths, and 6,871 marriages. Chief cities: Halifax (capital) 70,488 inhabitants in 1941, Sydney 28,305, Glace Bay 25,147, Dartmouth 10,847, Truro 10,272, New Waterford 9,302, New Glasgow 9,210, Amherst 8,620, Sydney Mines 8,198, Yarmouth 7,790. Education (1940-41): 146,926 students enrolled in schools and colleges.

Production. The gross value of agricultural output in 1942 was \$42,003,000 (field crops accounted for \$15,846,000, farm animals \$9,714,000, milk \$7,697,000, fruits and vegetables \$4,983,000, poultry and eggs \$3,237,000). Chief field crops (1942): oats 2,622,000 bu., potatoes 124,800 tons, turnips, etc. 196,000 tons, hay and clover 663,000 tons. Livestock (June 1, 1943): 212,500 cattle (including 104,300 milk cows), 161,600 sheep, 65,500 swine, 35,700 horses, 1,601,000 hens and chickens, 12,220 turkeys. Furs (1941-42): 101,731 pelts valued at \$532,059. Fisheries catch (1942): \$15,297,446. The gross value of all lumber products in 1941 was \$6,291,112.

Mineral output in 1942 was valued at \$31,652,244 (coal, 7,189,201 tons, accounted for \$28,822,786). Manufacturing (1941): 1,177 plants, 24,577 employees, \$27,527,339 for salaries and wages, \$76,779,821 for cost of materials, \$51,318,369 was the net value of production.

Government. Finance (year ended Nov. 30, 1942): revenue \$17,103,001; expenditure \$14,380,215; total direct and indirect liabilities (less sinking funds) \$93,536,064. The executive authority is vested in a lieutenant governor who is advised by a ministry of the House of Assembly, the latter

comprising 30 members elected for a five-year term by popular vote (23 Liberals, 4 Conservatives, and 3 Cooperative Commonwealth Federationists were elected at the provincial general election of Oct. 28, 1941). Ten members (appointed for life) in the Senate and 12 members in the House of Commons represent Nova Scotia in the Dominion Parliament at Ottawa. Lieutenant Governor, F. F. Mathers (app. May 31, 1940); Premier, A. S. MacMillan (Liberal; app. July 10, 1940). See **CANADA**.

NURSING. See **CIVILIAN DEFENSE**, **OFFICE OF**; **PUBLIC HEALTH SERVICE**; **RED CROSS**. For **Division of Nurse Education**, see **PUBLIC HEALTH SERVICE**.

NUTRITION. See **FOOD AND DRUG ADMINISTRATION**; **LIVING COSTS AND STANDARDS**; **PSYCHOLOGY** under *Psychodietetics*; **PUBLIC HEALTH SERVICE**; **UNITED NATIONS**. For the **Nutrition and Food Conservation Branch**, see **AGRICULTURE**, **U.S. DEPARTMENT OF**.

NYASALAND. A British protectorate in southeast Africa. Area, 37,374 square miles. Population (Jan. 1, 1941), 1,686,045, including 1,682,456 natives, 1,851 Asiatics, and 1,738 Europeans. Chief towns: Zomba (capital), Blantyre, Limbe, Cholo, and Lilongwe. Education (1941): 4,018 native schools with 181,521 students enrolled and an average attendance of 126,909. There are four elementary schools for European children.

Production and Trade. Chief products (with 1942 export figures)—tobacco (18,700,000 lb.), tea (12,400,000 lb.), cotton (4,584,000 lb.), maize, rubber, ivory, coffee, rice, sisal, groundnuts, and tung oil. Livestock (1941): 208,164 cattle, 205,208 goats, 44,387 swine, and 44,205 sheep. Trade (1942): imports £898,550 (textiles, vehicles, wood manufactures, machinery, metal manufactures, and petroleum products were the chief items); exports £1,409,642 (tobacco £702,100, tea £567,527, cotton £66,855).

Communications. In 1941 there were 3,733 miles of roads. Good motor roads link with South Africa and the extension northward links Nyasaland with the Great North Road through Northern Rhodesia, Tanganyika, and Kenya. Several airfields and emergency landing grounds have been constructed and regular air services for passengers and mail are operated. There is a railway system (3 ft. 6 in. gauge) extending from Chipoka on Lake Nyasa to Beira, Portuguese East Africa. A marine transport service is operated on Lake Nyasa by the railway authorities.

Government. Budget (1943): revenue £905,600 (£933,000 in 1942); expenditure £891,000 (£846,500). Public debt (Dec. 31, 1941) £3,698,281. Nyasaland is administered under the British Colonial Office by a governor, assisted by an executive council (nominated) and a legislative council (nominated). Governor and Commander in Chief, Sir Edmund Richards (appointed June 5, 1942).

NYLON. See **CHEMISTRY** under *Nylon*; **TEXTILES**; **WAR PRODUCTION BOARD** under *Salvage*.

OATS. The oats crop of the United States in 1943 was estimated by the U.S. Department of Agriculture at 1,143,867,000 bu., about 15 per cent below the 1942 bumper crop of 1,349,547,000 bu., but 12 per cent above the 1932-41 average of 1,018,783,000 bu. The harvested acreage of 38,449,000 acres was the largest since 1935 and compared with the 37,878,000 acres for 1942 and the 1932-41 average of 35,979,000 acres. Acre yields averaged 29.8 bu. in 1943 and 35.6 bu. in 1942. The seasonal average

price per bushel (preliminary) received by farmers was 71.0¢ and the estimated value of production was \$811,861,000 in 1943 compared to 48.7¢ and \$657,779,000 in 1942. The accompanying table lists the States leading in oats production in 1943.

State	Value	Acres Harvested	Production (bushels)
Iowa.....	125,128,000	4,907,000	184,012,000
Minn.....	94,242,000	4,327,000	142,791,000
Ill.....	81,426,000	3,427,000	113,091,000
Wis.....	75,260,000	2,573,000	100,347,000
Neb.....	47,306,000	2,172,000	71,676,000
S. D.....	44,415,000	2,350,000	70,500,000
N. D.....	43,264,000	2,086,000	70,924,000
Mo.....	36,225,000	2,250,000	51,750,000
Kan.....	32,723,000	1,976,000	47,424,000
Ind.....	24,245,000	1,444,000	33,212,000
Ohio.....	22,362,000	1,226,000	29,424,000
Mich.....	19,357,000	1,138,000	23,898,000
Texas.....	17,206,000	1,210,000	21,780,000
Okl.....	17,186,000	1,273,000	22,914,000
S. C.....	13,397,000	841,000	14,102,000
Penn.....	12,646,000	763,000	14,878,000
Mont.....	11,444,000	469,000	13,760,000
Ga.....	10,120,000	519,000	10,120,000

OBITUARIES. See **NECROLOGY**.

OCCUPATIONAL DEFERMENT. See **SELECTIVE SERVICE SYSTEM**.

OCCUPATIONAL DISEASE AND INJURY. See **ACCIDENTS**; **LABOR CONDITIONS**; **MINES**, **BUREAU OF**; **STATE LEGISLATION** under *Labor*.

OCCUPIED TERRITORIES. For lists of occupied territories, see **BRITISH EMPIRE**; **GERMANY** under *Area and Population*; **JAPAN** under *Recent Conquests*. For Allied Military Government of Occupied Territories, see **UNITED NATIONS**, and **ITALY** under *History*.

OCD. See **CIVILIAN DEFENSE**, **OFFICE OF**.

OCEANIA. French. See **FRENCH OCEANIA**.

OCEAN ISLAND. See **GILBERT** and **ELLICE ISLANDS**.

OCR. Office of Civilian Requirements. See **WAR PRODUCTION BOARD**.

ODT. See **DEFENSE TRANSPORTATION**, **OFFICE OF**.

OEM. See **EMERGENCY MANAGEMENT**, **OFFICE FOR**.

OES. See **ECONOMIC STABILIZATION**, **OFFICE OF**.

OEI. See **ECONOMIC WARFARE**, **OFFICE OF**.

OFFICES, Federal. See the key word of each title, as **CENSORSHIP**, **OFFICE OF**.

OFRR. See **RELIEF AND REHABILITATION**.

OHIO. An east north central State. Area: 41,222 sq. mi. Population: 6,907,612 (1940 census); 6,810,136 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. **AGRICULTURE**; **MINERAL PRODUCTION**; **ROADS AND STREETS**; **SCHOOLS**; **SOCIAL SECURITY BOARD**; **TAXATION**; **UNIVERSITIES**; and **VITAL STATISTICS**. The census of manufactures has been suspended for the time being; for the latest information, see 1941 **YEAR BOOK**, p. 430.

Elections. See the article **ELECTIONS IN THE UNITED STATES**; also, for incumbents, **HOUSE OF REPRESENTATIVES** and **SENATE**.

Legislation. See the separate article on **STATE LEGISLATION**.

Officers. The Governor is John W. Bricker (Rep.), inaugurated in January, 1943, for his third two-year term; Lieutenant Governor, Paul M. Herbert; Secretary of State, Edward J. Hummel; Attorney General, Thomas J. Herbert. See **RAPID TRANSIT**.

OIL. See topics listed under **FATS AND OILS** and **PETROLEUM**.

OKLAHOMA. A west south central State. Area: 69,919 sq. mi. Population: 2,336,434 (1940 census); 2,103,484 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. **AGRICULTURE**; **MINERAL PRODUCTION**; **ROADS AND STREETS**; **SCHOOLS**; **SOCIAL SECURITY BOARD**; **TAXATION**; **UNIVERSITIES**; and **VITAL STATISTICS**. The census of manufactures has been suspended for the time being; for the latest information, see 1941 **YEAR BOOK**, p. 430.

Elections. See the article **ELECTIONS IN THE UNITED STATES**; also, for incumbents, **HOUSE OF REPRESENTATIVES** and **SENATE**.

Legislation. See the separate article on **STATE LEGISLATION**.

Officers. The Governor is Robert S. Kerr (Dem.), inaugurated in January, 1943, for a two-year term; Lieutenant Governor, James E. Berry; Secretary of State, Frank S. Carter; Attorney General, Mac Q. Williamson. See **FLOODS**; **PRISONS** under *Prison Scandals*.

OLD-AGE ASSISTANCE, INSURANCE, PENSIONS. See **SOCIAL SECURITY BOARD**; also, **PALESTINE** under *History*; **RAILWAYS**; **STATE LEGISLATION** under *State Government and Labor*.

OLIVINE. See **CHEMISTRY** under *Magnesium*.

OMAN. See **ARABIA** under *Muscat and Oman*.

ONTARIO. A Canadian province between Quebec and Manitoba. Area, 412,582 square miles, including 49,300 square miles of fresh water. Population (1941 census), 3,787,655 (1,921,201 male; 1,866,454 female), comprising, by racial origin, British 2,729,830, French 373,990, German 167,102, Netherlands 73,001, Jewish 69,875, Italian 60,085, Polish 54,893, Ukrainian 48,158, etc. Religious membership (1941 census): United Church 1,073,425, Roman Catholic 882,369, Anglican 815,413, Presbyterian 433,708, Baptist 192,915, Lutheran 104,111, etc. In 1942 there were 78,080 living births, 39,085 deaths, and 45,468 marriages. Chief cities: Toronto (capital) 667,457 inhabitants in 1941, Hamilton 166,337, Ottawa 154,951, Windsor 105,311, London 78,264, Kitchener 35,657, Sudbury 32,203, Brantford 31,948, Fort William 30,585, St. Catharines 30,275, Kingston 30,126. Education 737,495 students enrolled in schools and colleges.

Production. The gross value of agricultural output for 1942 was \$558,658,000 (field crops accounted for \$209,014,000, farm animals \$139,208,000, milk \$102,716,000, poultry and eggs \$47,704,000, fruits and vegetables \$33,466,000, tobacco \$18,350,000). Chief field crops (1942): oats 84,538,000 bu., mixed grains 50,759,000 bu., corn for husking 13,622,000 bu., barley 12,179,000 bu., potatoes 358,050 tons, turnips, etc. 634,700 tons, hay and clover 5,962,000 tons, alfalfa 2,091,000 tons, fodder corn 3,135,000 tons, sugar beets 245,000 tons. Livestock (June 1, 1943): 2,693,700 cattle (including 1,169,700 milk cows), 1,885,600 swine, 737,500 sheep, 522,200 horses, 25,403,100 hens and chickens, 668,300 turkeys. Fur output (1941-42): 1,024,195 pelts valued at \$3,965,003. The 1942 fisheries catch was worth \$4,103,345. Pulp and paper products in 1942 had a net value of \$50,340,500. In 1941 the gross value of lumber products was \$23,173,015.

Mineral output in 1942 was valued at \$258,423,267 (gold, 2,756,922 fine oz., accounted for \$106,141,497, other metals \$124,366,057). Manufacturing (1941): 10,250 plants, 468,230 employees,

\$660,722,278 for salaries and wages, \$1,683,912,216 for cost of materials, \$1,360,055,756 was the net value of production.

Government. Finance (year ended Mar. 31, 1942): revenue \$111,496,170; expenditure \$96,337,016; total direct and indirect liabilities (less sinking funds) \$847,887,493. The executive authority is vested in a lieutenant governor who is advised by a ministry of the Legislative Assembly. There is a single chamber in the Legislative Assembly comprising 90 members elected for a five-year term by popular vote. At the provincial general election held on Aug. 4, 1943, there were elected 39 Progressive Conservatives, 34 Cooperative Commonwealth Federationists (C.C.F.), 14 Liberals, and 3 others. Ontario is represented in the Dominion Parliament at Ottawa by 24 members (appointed for life) in the Senate and 82 elected members in the House of Commons. Lieutenant Governor, Albert Matthews (app. Nov. 30, 1937); Premier, Col. George Drew (Progressive Conservative).

OPA. See PRICE ADMINISTRATION, OFFICE OF.
OPERA. See MUSIC.

OPINION RESEARCH CENTER, National. An institution established in 1941 by the Field Foundation, Inc., of New York City, in association with the University of Denver, as the first non-profit, non-commercial organization in the United States devoted to the measurement of public opinion.

During 1943 the Center continued its study of public opinion regarding postwar problems both international and domestic. Nationwide studies were made of popular attitudes toward a world union, the powers of such an organization, and the degree of responsibility United States membership might entail. Further research was made in the field of related economic problems—reparations, lend-lease, and trade barriers. Attitudes toward the problems of reconversion in the United States, including re-employment of war workers and veterans, and the issue of social security were surveyed. The findings were embodied in a series of published reports.

A special report dealt with public opinion regarding the part that the churches—organized religion—should play in planning for peace. Two special studies were focussed on the interrelated problems of inflation: subsidies, wages and salaries, and prices. Attention was also given to certain educational problems, including public opinion regarding Federal aid to public education. Trends were accumulated on such topics as: attitudes toward Axis peoples, the American people and the war effort, gasoline rationing, and the United States' postwar territorial policy.

In September, 1943, the Center launched *Opinion News*, a fortnightly digest of outstanding polls and surveys. This publication summarizes the findings of the leading opinion polls and surveys, including the Gallup Polls, the *Fortune* Poll, and others. Early in the year the Center published a distorted map of the world, "Distribution of World Population," in which each country is drawn in proportion to its population instead of its land area. In anticipation of the 1944 election, the Center also published a series of nine distorted maps based on the popular vote for president in 1940. See ELECTIONS.

The National Opinion Research Center has also made several surveys for other non-profit organizations, including the United States Government; Carnegie Endowment for International Peace; Civic Research Institute (Kansas City); National Child

Labor Committee; Social Science Foundation (Denver); United Service Organizations. The Director is Harry H. Field; Assistant Director and Statistician, William K. Salstrom.

OPIUM. See NARCOTIC DRUGS CONTROL; NETHERLANDS under *History*.

ORANGE FREE STATE. See SOUTH AFRICA, UNION OF.
ORCHESTRAS. See MUSIC; RADIO PROGRAMS.

OREGON. A Pacific State. Area: 96,981 sq. mi. Population: 1,089,684 (1940 census); 1,141,078 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Earl Snell (Rep.), inaugurated in January, 1943, for a three-year term; Secretary of State, Robert S. Farrell; Attorney General I. H. Van Winkle. See CHROMIUM.

ORGANIZATIONS. See SOCIETIES AND ASSOCIATIONS.
ORIENTAL FRUIT MOTH. See INSECT PESTS.

ORTHODOX CHURCHES. See RELIGIOUS ORGANIZATIONS; also, UNION OF SOVIET SOCIALIST REPUBLICS under *History*.

OSMIUM. See PLATINUM.

OSRD. See SCIENTIFIC RESEARCH AND DEVELOPMENT, OFFICE OF.

OSTLAND. See LITHUANIA under *Government*.

OSTMARK. See AUSTRIA.

OUTER MONGOLIA. See MONGOLIA.

OVERSEAS EDITIONS. See MAGAZINES.

OVERSEAS OPERATIONS BRANCH. See WAR INFORMATION, OFFICE OF.

OWI. See WAR INFORMATION, OFFICE OF.

PACIFIC WAR COUNCIL. See 1943 YEAR BOOK, p. 515.

PACKAGING. See PAPER AND PULP.

PAHANG. See BRITISH MALAYA.

PAINT AND VARNISH. See BUILDING MATERIALS; BUSINESS REVIEW; CHEMISTRY under *Paint*.

PAINTING. See ART.

PAKISTAN. See INDIA under *History*.

PALAU ISLANDS. A group of islands (143° 10' E. and 6° 50' N.) in the western Carolines of the Japanese Pacific Islands (which see). The chief islands of the group are Palau proper, or Babeldaob (143 sq. mi.), Angaur (3 sq. mi.), and Koror (3 sq. mi.). Total area, 184 square miles. Civil population (1938), 12,798. Angaur supplies some 20 per cent of Japan's normal phosphate needs, the total deposits of the island being estimated at 2,400,000 tons. The laterite deposits contain a large amount of bauxite. There are many good anchorages for ships and a large harbor at Malakai.

PALESTINE. A former district of the Turkish province of Syria, conquered by British forces in 1917, and administered by Great Britain under a mandate of the League of Nations since Sept. 29, 1923. Capital, Jerusalem.

Area and Population. Area, 10,429 sq. mi. Estimated population on June 30, 1942, 1,605,816 (excluding British military forces); of this total, 987,985 were Moslems (mostly Arabs), 478,449 Jews, and 126,344 Christians (including some Arabs). In 1918 there were about 50,000 Jews and 650,000 Arab Moslems. The increase of the Jews from 7 to 30 per cent of the total population was due mainly to immigration, as the fecundity of the Arabs is greater. Of the 57,879 births in Palestine in 1941, 44,009 were Moslems and 9,714 Jews. There were 24,485 deaths (Moslems, 19,133; Jews, 3,710). Between Apr. 1, 1939, and Sept. 30, 1942, 38,000 Jewish immigrants entered Palestine, of whom 20,000 entered illegally. Estimated populations of the chief cities in 1941: Jerusalem, 141,100 (86,000 Jews); Tel-Aviv, 140,700 (all Jews); Haifa, 114,400 (57,000 Jews); Jaffa, 85,300; Gaza, 27,400; Nablus, 21,900; Hebron, 21,000; Petah Tiqva, 17,400; Lydda, 15,700.

Education. Education is not compulsory. In 1940-41 there were 1,491 schools of all types, with 7,483 teachers and 177,864 pupils. For Arab children, there were 403 government schools with 54,645 pupils and 191 private Moslem schools with 15,505 pupils. The Hebrew public school system consisted of 413 schools with 59,163 pupils, and there were 298 private Jewish schools with 23,892 pupils. Christian schools numbered 186 with 24,659 pupils. The Hebrew Technical Institute at Haifa in 1940-41 had 344 students and the Hebrew University on Mount Scopus, Jerusalem, 1,106 students.

Production. Agriculture supports over 50 per cent of the population, although manufactures have in recent years exceeded agricultural products in value. The chief crop is citrus fruit, which was hard hit by the war. Exports declined from 15,000,000 cases in the 1938-39 season to 170,000 in 1940-41. The 1942-43 crop was estimated at 4,500,000 cases, of which about 2,000,000 cases were consumed locally, 1,000,000 purchased for the Allied armies, and the remainder shipped to Syria, Lebanon, and Egypt. Yields of other crops were (metric tons): Wheat, 112,000 in 1942 (90,000 in 1941); barley, 122,000 in 1942 (68,000 in 1941); olives, 62,708 in 1942 worth \$11,469,000; olive oil, 9,455 in 1942-43; sesamum, 7,600 in 1940; tobacco, 1,000 in 1940; durrah and corn, 74,335 in 1941; potatoes, 20,736 in 1941; vegetables (including onions), 169,058 in 1941; rice (grown for the first time), 400 in 1943. Livestock in 1943: 242,945 cattle, 244,062 sheep, 325,376 goats, 29,736 camels, 19,021 horses, 107,736 donkeys, 12,145 swine, 4,972 buffaloes.

Cement output in 1940 was 149,000 metric tons; potash, 63,527 in 1939; salt, 9,944 in 1940; gypsum, 4,403 in 1940; sulphur, 1,380 in 1940; refined bromine, 589 tons in 1939. The principal manufactures are clothing, textiles, leather, timber products, metals and machinery, printing and paper, food, chemicals, olive oil, soap, and wine. A large oil refinery completed at Haifa in 1940 received oil by pipeline from the Kirkuk fields in Iraq. In 1942 there were 1,299 factories with 30,000 workers producing essential supplies. Early in 1943 Jewish industrial enterprises had a total capital investment of £P14,000,000, of which some £P2,000,000 had been invested since the beginning of the war. Jewish industry comprised 76 textile factories, 52 metal works, 47 chemical plants, 30 diamond-cutting factories, 28 foodstuffs factories, etc.

Foreign Trade. Excluding military stores and fuel, imports in 1941 were valued at £P12,038,280 (£P11,035,454 in 1940); exports, excluding petroleum and Dead Sea chemicals, £P1,361,895

(£P2,114,584 in 1940). Chief 1941 exports: Wearing apparel, £P153,207; polished diamonds, £P143,693; chocolate, £P116,963; edible olive oil, £P90,568; hides and skins, £P70,912; soap, £P53,743. Of the 1941 imports, the United Kingdom supplied £P3,619,610; Egypt, £P1,575,237; United States, £P1,160,817. Of the exports, Egypt took £P579,329; Syria, £P148,647; United States, £P133,450; Turkey, £P120,828; United Kingdom £P80,668.

Finance. For the fiscal year ended Mar. 31, 1943, preliminary returns showed receipts of £P8,770,000 and expenditures of £P9,860,000. Final returns for 1941-42: Receipts, £P8,326,000; expenditures, £P7,464,000. The accumulated budget surplus declined from £P5,270,000 on Apr. 1, 1942, to £P4,180,000 on Apr. 1, 1943. Governmental receipts included grants-in-aid from the British Exchequer amounting to £P2,100,000 in 1941-42 and £P670,000 in 1942-43. Public debt, £P4,475,000 in January, 1942. The Palestine pound (£P) is equivalent to 1 pound sterling (\$4.03).

Transportation. The 328 miles of railway line and the highway network of over 2,500 miles with which Palestine entered World War II were later extended and improved for strategic purposes. The railway linking Cairo, Egypt, with Haifa, was extended 175 miles northward in 1942 to connect with the Syrian, Turkish, and Iraq networks at Beyrouth. Scores of asphalt military highways were built in Palestine and trunk highways were opened bringing Cairo within 10 hours drive of Jerusalem and linking Haifa with Baghdad. Lydda and other Palestinian cities are connected by air with Egypt, Iraq, and more distant points under Allied control.

Government. The territory is administered by a High Commissioner (Sir Harold Alfred MacMichael, assumed the office Mar. 1, 1938), who is appointed by the British Crown and assisted by appointed executive and advisory councils. The Jewish, Moslem, and Christian communities have autonomous control of their religious, cultural, and communal affairs. Official languages, English, Arabic, Hebrew. For 1943 developments, see below.

HISTORY

Arab-Jewish Crisis. The struggle between Arabs and Jews for the control of Palestine mounted toward another crisis during 1943. Both sides intensified their underground preparations for armed violence, and observers warned that the Palestinian question would lead to riots and pogroms throughout the Middle East unless it was handled with fairness and firmness.

Two developments served to bring the irreconcilable Arab-Jewish claims to Palestine back into the foreground of discussion both in the Holy Land and among the United Nations. The rapidly changing fortunes of war forecast an early United Nations' victory, while the Nazis speeded up measures for the extermination of the Jews throughout most of Axis-controlled Europe. Both of these developments led Zionists the world over to intensify their efforts to nullify the official British policy, set forth in the 1939 White Paper (see 1939 YEAR BOOK, p. 591), which made permanent the minority status of the Jews in Palestine through restrictions on immigration and land sales. The Zionists demanded the lowering of immigration bars to provide a refuge for the persecuted Jews of Europe. At the same time they agitated for the establishment of a separate army of Palestinian and stateless Jews to fight under the Zionist banner with the United Nations forces. Both of these moves were designed to

strengthen the Zionist demand at the forthcoming peace conference for repudiation of the 1939 White Paper and the recognition of Jewish sovereignty over Palestine.

Early in 1943 the Jewish Agency for Palestine submitted proposals to the British and other United Nations governments for the immediate admission of large numbers of European Jews to save them from extermination and to relieve the acute labor shortage in Palestine. Demonstrations in support of this program were held throughout Palestine on June 14. The Arab press strongly opposed the suggestion, contending that some other asylum must be found for European Jews. Arab leaders said they could not permit the Zionists to use the plight of European Jews as a lever for attaining their political aims in Palestine.

The British authorities held to the immigration quotas laid down in 1939, with minor exceptions. They permitted the entry in February of 1,228 Polish Jews, who had made a three-year odyssey from Poland through Russia, Iran, and Iraq. They arranged to receive 4,000 Jewish children and 500 adults from Bulgaria, and also promised to admit another 29,000 Jewish children with a smaller number of adults up to Mar. 31, 1944. The British Colonial Secretary on November 10 said that 43,922 Jews had entered Palestine legally and illegally up to Sept. 30, 1943, as against the total of 75,000 who were to be admitted up to Mar. 31, 1944, under the five-year quota system set up in the 1939 White Paper. Attributing the failure to fill the quota to wartime transportation difficulties, he announced that the British Government had decided to extend the time limit for the entrance of the remaining 31,078. However the Colonial Secretary indicated that there would be no change in the basic policy of the White Paper, which made further Jewish immigration into Palestine subject to Arab consent.

The Zionist campaign against the 1939 White Paper spurred Arab leaders in Palestine to undertake the establishment of a representative political agency to take the place of the Arab Higher Committee, dissolved by the British administration in 1937 because of its connection with Arab terrorist activities. Arab leaders in neighboring countries sought to counteract Zionist activity by speeding negotiations for the establishment of an Arab federation to include Palestine, and in some cases by aligning the Arab states more closely with the United Nations war effort (see ARABIA, EGYPT, IRAQ, and SYRIA AND LEBANON, under *History*). In distant India the annual session of the All-India Moslem League on April 27 adopted a resolution condemning Zionist propaganda for a Jewish national state in Palestine as "a deliberate attempt to perpetuate a wrong on the Arab and Islamic world. . . ." Meanwhile Axis propaganda broadcasts to the Moslem peoples of the Middle East dwelt on the fear that a United Nations victory would mean Jewish domination of Palestine and subsequent aggressions upon neighboring Arab lands.

Preparations for War. In a New Year's broadcast, High Commissioner MacMichael appealed to both Jews and Arabs to "face with cool, balanced wisdom the great responsibility that lies upon you for the maintenance of peace and goodwill in the Palestine of the future." Minority elements among both Jews and Arabs continued to strive for a peaceful compromise in the form of a bi-national Arab-Jewish state (see Dr. Judah L. Magnes, "Toward Peace in Palestine," *Foreign Affairs*, January, 1943, p. 239 f.). However the dominant forces on

both sides rejected compromise and speeded preparations for armed hostilities.

According to a correspondent of the *New York Times*, Arabs and Jews were both storing weapons in secret caches and organizing for offensive and defensive military operations. He stated that the Jewish Socialists and middle-class elements were preparing for self-defense only, but that the militant Revisionists were prepared to attack Arab areas in the event of trouble.

The correspondent reported that the Jewish Agency was recruiting Jewish volunteers for British and other United Nations armed forces for two reasons—to demonstrate active Jewish aid and to prepare Jews in the handling of weapons as a precaution against war with the Arabs. In January British authorities were obliged to enact a law to prevent terrorists and "hooligans" from using bombs, castor oil, and other means to persuade reluctant Jews to volunteer for military service.

The correspondent's report was substantiated in part on August 11 when a British military court in Jerusalem sentenced two British soldiers to 15-year prison terms for selling arms to an unnamed underground organization allegedly connected with the Jewish Agency for Palestine. The president of the court said that this "vast and dangerous organization with vast resources behind it" threatened "the safety and defense of Palestine."

In their confession, the two convicted British soldiers named four Palestine Jews as members of a Jewish arms smuggling gang which had paid them sums up to \$3,600 to steal guns and ammunition from military dumps in Palestine and Egypt and prepare the way for delivery of the stolen weapons. Two of the four Jews involved—A. Tannenbaum, former inspector of Palestine police, and Isaac Levy—eluded arrest, but the other two were convicted by a British court-martial in Jerusalem on September 27 of the illegal possession of 300 Australian rifles and 105,000 American cartridges. The defendants were Abraham Rachlin, taxicab driver and former member of the Palestine police force, and Leib Sirkin, secretary of the Jewish seaman's union. They were sentenced to seven and ten years' imprisonment, respectively.

The trial of Rachlin and Sirkin aroused great interest and bitter controversy in Palestine because of prosecution assertions that the "vast, wealthy, unscrupulous gun-running organization" to which they belonged operated with the connivance if not the full knowledge and encouragement of the official Jewish Agency for Palestine. Sixty-three witnesses testified that the arms smugglers described themselves as working for the Jewish Agency. A Haifa official of the Agency was identified as one of those directly involved in the negotiations. These charges were flatly denied by David Ben Gurion, chairman of the executive committee of the Jewish Agency, and other spokesmen. Ben Gurion said the trial was "a crude frame-up designed to defame the Jewish war effort and bring Jewish soldiers into disrepute." He blamed "an anti-Semitic group in Palestine which is attempting to incite Anglo-American public opinion against Jews and prejudice the Jewish future in Palestine."

The British authorities continued their drive to break up the illegal accumulation of arms by both Arabs and Jews. The military tribunal that heard the Rachlin and Sirkin cases sentenced Eliahu Sacharoff, another well-known Jew, to seven years' imprisonment on October 7 for the illegal possession of two rounds of ammunition, one of which was similar to the American ammunition figuring in the Rachlin-Sirkin trial. On November 16 Pales-

tine police, aided by Indian troops and Polish military police, searched the Jewish village of Ramat Hakovesh for Jewish deserters from the Polish armed forces reported to have been harbored there and for illegal arms said to have been cached in the village for the training of an illegal Jewish military organization. Thirty-four of the villagers were arrested after the search.

On November 20 the Palestine authorities suspended nine daily Hebrew newspapers and a German-language daily at Tel-Aviv for one week for publishing uniform statements, officially described as "highly tendentious accounts of the search," without submitting them to the required censorship. The Jewish account of the search said there had been violence on both sides and that all male villagers had been forcibly rounded up inside a barbed-wire enclosure. These events were followed on November 20 by anti-British riots and various protest meetings in Tel-Aviv. Twenty-one Jewish residents and 11 British constables were injured in the rioting. The suspended newspapers were permitted to resume publication November 30 and the arrested villagers were released on bail two weeks later.

A Jerusalem military court on December 10 convicted seven Jewish villagers of Kibbutz Hulda of the illegal possession of 68 mortar bombs and 85 ballistite cartridges found there on October 3. Rejecting the court's offer of a lighter sentence if they revealed the source of these weapons, the defendants were sentenced to prison on December 17 for terms ranging from two to six years.

British Block Jewish Army. Despite pressure from Zionist organizations in Britain and the United States, the British Government declined to authorize the creation of a separate Jewish army. However Jewish volunteers for service in the British armed forces considerably outnumbered Arab volunteers. A dispatch of Aug. 1, 1943, to the *New York Times* reported that there were about 22,000 Jewish men in the British armed forces, 7,000 in auxiliary police units, and 35,000 in civil defense work. Arab volunteers numbered about 6,000 in the armed forces, 4,000 in the auxiliary police, and 10,000 in civil defense. The volunteer mixed Arab-Jewish defense force created in December, 1940, to resist a threatened Axis invasion was dissolved in December, 1943, on the ground that it served no further useful purpose.

Economic Developments. The presence in Palestine and nearby countries of large Allied military forces created an unprecedented demand for military supplies and foodstuffs, accompanied by an acute labor shortage and rising living costs. Many Arab and Jewish truck farmers made relatively enormous profits. Industrial plants producing essential supplies operated at full capacity and there was a rapid growth of new industries.

The latter development was due in large part to assistance provided by the United Kingdom Commercial Corporation, acting as agent for the Middle East Supply Center. The Corporation made available the shipping, raw materials, and equipment for the development of Palestine as a major allied supply base. With the Corporation's technical and financial aid, plants were erected for the production of sulfuric, nitric, and hydrochloric acids in quantities sufficient to meet the needs of Palestine, Syria, Cyprus, and Turkey. The need of shipping to import superphosphate fertilizer for the me region was largely eliminated by a UKCC scheme to manufacture the fertilizer from the raw phosphates of Trans-Jordan and the surplus sul-

furic acid and acid-tar products of the Haifa oil refinery.

The Palestine authorities met the danger of inflation and labor scarcity by more strict control of prices and the rationing of both manpower and foodstuffs. The subsidy for citrus growers was continued to tide them over the war crisis. In November citrus exports were resumed for the first time since 1940. New and heavier taxation was imposed to eliminate a budget deficit and offset the decrease in the British Exchequer's annual grant-in-aid to Palestine. At the same time more liberal labor legislation was enacted. In March Sir Douglas Harris was appointed to the newly created post of Reconstruction Commissioner to prepare for postwar economic developments. However the Zionist General Council in July voted to refuse its cooperation with government reconstruction schemes so long as the Administration proceeded on the basis of the 1939 White Paper.

A War Economic Advisory Council, composed of 4 Arabs, 4 Jews, and 2 Britons, was appointed November 3 to coordinate the activities of the 11 controllers in charge of the various fields of civilian war effort. In connection with the anti-inflation drive, provision was made in September for the establishment of low-cost restaurants and for revision of the food distribution system.

Effective Jan. 1, 1943, the General Federation of Jewish Labor established an old-age pension fund on the lines of the Beveridge plan. Through a special levy on all members, the federation proposed to pay a monthly pension of 2£ 10s. to members incapable of self-support, beginning Jan. 1, 1945.

See EGYPT, GREAT BRITAIN, IRAQ, under *History*; ARCHAEOLOGY; CHEMISTRY under *Foreign*; MUSIC; REFUGEES.

PALLADIUM. See PLATINUM.

PALMYRA, ISLAND. An atoll in the Central Pacific, belonging to the United States. Lying 1,109 air miles southwest of Honolulu and 1,513 miles northeast of Pago Pago in American Samoa, it is an important station on the Hawaii-Samoa air route. Land area, 1½ square miles. Population (1940 census), 32. With funds appropriated by Congress in 1939 and 1941, the U.S. Navy Department, which has jurisdiction over the island, converted it into a naval air station (commissioned Aug. 15, 1941).

PANAMA. A republic of Central America, bisected by the Panama Canal (which see). Capital, the city of Panama.

Area and Population. Area, 34,169 square miles. Population (1940 census), 631,637, including civil population of 566,677 and Indian population (living in tribes) of 64,960. Chief cities (1940 census): Panama, 111,893 (21,619 whites, 29,402 Negroes, 58,375 of mixed race, and 2,497 others); Colón, 44,393 (8,107 whites, 23,532 Negroes, 10,908 mixed, and 1,846 others); David, 9,222. On Jan. 1, 1941, there were 7,222 United States citizens in the republic.

Defense. On July 7, 1942, an agreement was signed by the U.S. Secretary of State, Cordell Hull, and the Ambassador of Panama at Washington, providing for a U.S. army officer to serve as adviser to Panama's Foreign Minister in matters pertaining to defense. Air and anti-aircraft bases for the defense of the Canal Zone were granted to the United States in 1941. There were 2,150 officers and men in the National Police Force.

Education and Religion. The census of 1940 re-

vealed that 93 per cent of the individuals of 10 years of age and over had received at least a primary-school education. In 1940-41 there were 63,122 pupils in 621 public elementary schools, 4,021 pupils in 7 secondary schools, 1,028 pupils in the college for higher education, and 725 pupils in the National University of Panama; in addition there were various special, normal, and vocational schools. The Constitution of Jan. 2, 1941, recognizes the Roman Catholic Church as that of the majority of the people, but guarantees freedom of religion.

Production. As of July, 1942, approximately one-third of Panama City's working population and one-half of Colón's were employed by Canal Zone agencies. The remainder of the employed population of the republic was engaged mainly in commerce, the tourist trade, agriculture, cattle raising, lumbering, and pearl fishing. Bananas were the chief export crop until the war shipping crisis of 1942-43 caused abandonment of 12,000 acres of banana plantations. Banana exports declined from 6,400,000 stems in 1938 to 2,369,000 stems in 1942; cacao exports from 11,601,000 lb. in 1939 to 4,809,000 lb. in 1942. Yields of abaca and the food crops increased. The 1942 harvest included: Rice, 112,000,000 lb.; corn, 777,347 quintals; and record yields of beans and cassava. White sugar production (1942) was 4,078 short tons. There were 333,960 cattle and 138,000 hogs in June, 1942—twice as many as in 1938. Some rubber (17,773 kilos in 1941), gold, and coconuts are exported.

Foreign Trade. Imports in 1942 totaled 37,580,000 balboas (32,504,000 in 1941); exports, 2,229,000 balboas (4,283,000 in 1941). The United States in 1941 supplied 81.5 per cent of the total imports and took 97.1 per cent of the exports (excluding reexports). Bananas, cocoa beans, gold bullion, and coconuts were the chief 1941 exports. Gasoline, wood, cement, wheat flour, perfumes and cosmetics, and industrial machinery were the leading imports.

Finance. Budget estimates for the two-year period 1941-42 balanced at \$30,127,977 (\$39,378,714 for 1943-44). Actual revenues for the calendar year 1942 were \$22,310,000 (\$17,621,460 in 1941); actual expenditures, \$21,347,000 (\$18,046,000 in 1941). The 1941 returns excluded \$4,000,000 received from the sale of bonds and \$3,972,356 paid for interest and amortization on loans. The internal debt was reportedly liquidated during 1942. External debt, 18,560,000 balboas on Dec. 31, 1942. The balboa, unit of currency, is equal to the U.S. dollar.

Transportation. The chief railway is the Panama Railroad in the Canal Zone, which connects Panama City and Colón. Highways extend over 870 miles. During World War II a network of important military highways was constructed by the United States in the Canal Zone and Panama. It included the final Panamanian section of the Pan American Highway, the Trans-Isthmian Highway, and the Chorrera-Rio Hato road. In 1942 the U.S. Government also undertook to construct a macadam highway from Piña on the Atlantic side of the Isthmus to the Canal Zone boundary at Rio Providencia, and to extend the Trans-Isthmian Highway from Madrinal to Panama City via Roque and Pueblo Nuevo (see 1943 YEAR BOOK). Air transport services are provided by Pan American Airways. As of Dec. 31, 1941, a total of 327 ships of 1,344,345 gross tons (mostly foreign-owned) were registered under the flag of Panama.

Government. The Constitution effective Jan. 2, 1941 (see YEAR BOOK for 1940, p. 575), extended

the terms of office of the President and members of the National Assembly from four to six years and increased the powers of the President. The President and the 32 members of the National Assembly are elected by direct popular vote. President Arnulfo Arias was deposed on Oct. 9, 1941, during his unauthorized absence from Panama, and was succeeded by Ricardo Adolfo de la Guardia, Minister of Government and Justice (see 1942 YEAR BOOK for details). On Jan. 4, 1943, the National Assembly adopted a resolution continuing the de la Guardia administration in power for two more years. Panama declared a state of war with Japan on December 8 and with Germany and Italy on Dec. 12, 1941. For 1943 developments, see below.

HISTORY

The administration of President Ricardo Adolfo de la Guardia received an additional two years' lease on power by a resolution adopted by the National Assembly on Jan. 5, 1943, by a vote of 28 to 4. This action followed preparations for continuance of the Government in office made during 1942 (see 1943 YEAR BOOK). During the debate in the National Assembly that preceded the vote, Foreign Minister Octavio Fábrega attacked former President Arnulfo Arias, who was in exile in Argentina, as "a second-class dictator" who had in 1940 "brought the German spy Karl Brunner here, so that he could inform Germany of all that was being done at this strategic spot." He said that President de la Guardia had demonstrated his attachment to hemispheric solidarity and his determination to keep Axis spies and saboteurs out of the republic.

In a speech accepting the honorary presidency of the anti-totalitarian International Democratic Action society, the President pledged himself to maintain "public liberty and individual rights . . . until the last second of my administration." A revolutionary plot against the Government was nipped in the bud August 28 with the arrest of Dr. José Pezet, former Minister of Education in the Arnulfo Arias administration, Pezet's nephew, and 13 police officials. Pezet, who claimed that he became the lawful President of Panama upon the ousting of President Arias by the 1941 coup, was charged with attempting to secure the support of the national police through bribes and promises of promotions.

The de la Guardia administration maintained close friendship and collaboration with the U.S. Government throughout the year. Vice President Henry A. Wallace was warmly welcomed when he visited Panama on his goodwill tour of Latin America on March 22-24. The two important agreements signed by the U.S. and Panamanian Governments on May 18, 1942 (see 1943 YEAR BOOK, p. 519) were ratified in May, 1943, and placed in effect. The U.S. Senate on April 26 approved by a vote of 37 to 19 the agreement under which the United States undertook to turn over to Panama water and sewage systems and real estate holdings in the cities of Colón and Panama and to cancel a \$2,700,000 debt representing Panama's share in the construction of the Chorrera-Rio Hato highway. This legislation was signed by President Roosevelt on May 3. On May 11 the National Assembly of Panama unanimously approved the complementary agreement governing the use of defense sites on Panama's territory by American forces defending the Canal.

The detail of a U.S. Army officer to serve as adviser to the Panamanian Minister of Foreign Affairs, agreed upon July 7, 1942, was extended for another year through an exchange of notes signed

July 6 and Aug. 5, 1943. Sixteen electric light plants owned by the Government of Panama were sold to the Panama Electric Company, a subsidiary of the Electric Bond and Share Company, for \$250,000 on September 15. It was announced on May 9 that dry excavation for the third set of locks for the Panama Canal was almost completed.

The new Inter-American University was opened September 27 in Panama, with the Government contributing \$4,000 monthly toward its organization and maintenance. It was understood that the Government's contribution was to provide five professorships and 20 scholarships for distribution among teachers and students of the entire hemisphere. Students of the Inter-American University, the National Institute, and the Girls Lyceum went on strike in November in protest against the discharge of a professor, who was accused by the Government of neglect of duty and political activities incompatible with his position.

Panama enjoyed boom conditions during 1943 as a result of heavy expenditures by contractors at work on the Panama Canal and by the numerous United States service men stationed in or passing through the Canal Zone. Meanwhile the lack of imports resulted in an accumulation of purchasing power out of all proportion to the republic's size and normal wealth. The agricultural development program launched in 1942 yielded favorable results, particularly in the increased production of rice and corn, the basic diet of the people. On April 8 the National Assembly approved a bill for the promotion of agricultural colonies; it authorized homesteaders to occupy Government land tax-free and to secure title to the land after working it for two years.

See SPANISH-AMERICAN LITERATURES; WORLD WAR (for Panama's war declarations).

PANAMA CANAL. See COORDINATOR OF INTER-AMERICAN AFFAIRS; PANAMA CANAL ZONE; ROADS AND STREETS.

PANAMA CANAL ZONE. This strip of land crosses the Isthmus of Panama and extends about five miles on each side of the canal between the cities of Colon on the Atlantic Ocean and Panama on the Pacific Ocean. By means of a treaty with the Republic of Panama in 1903 the United States leased the Canal Zone in perpetuity at an annual rental of \$250,000 (gold currency). In 1933 the United States went off the gold standard and since then the annuity has been fixed at \$430,000 payable in any currency. Area, 552.95 sq. mi., including 190.94 sq. mi. of water.

Population. The 1940 U.S. census reported 51,827 persons, both civilian and military, in the Canal Zone. Of this number less than one-half were whites from the States. The remainder were mostly Negroes who were born or had parents who were born in the English-speaking West Indies. This accounts for the widespread use of English in the Canal Zone. Detailed 1943 statistics on population were not available because of censorship. But in 1940 the death rate was 6.43 per 1,000 and the birth rate 12.56 per 1,000. Sufferers from malaria among the civil population averaged 17 per 1,000. Illiteracy was low in the white civilian population, 2.3 per cent in 1930, but higher among the Negroes, 16.8 per cent in 1930. (The Federal census for 1940 did not record any illiteracy figures.) Public schools for both whites and Negroes are supported by Congressional appropriations. Opportunities are available for white children through the Junior College level and for Negroes through

the ninth grade. There is maintained, however, a Normal School for the purpose of training Negro teachers.

Panama Canal Finances. For the fiscal year ended June 30, 1943, total revenues of the Panama Canal were \$8,872,067, net appropriation expenses \$11,268,564, and the net deficit \$2,396,497. The net capital investment in the Canal, after depreciation, as of June 30, 1943, was \$644,826,653, including \$128,991,063 interest on funds borrowed to construct the Canal up to the opening on July 12, 1920.

Economic Conditions. The Panama Canal Zone is a U.S. military reservation whose principal industry during peace times is the maintenance and operation of the Panama Canal. All other functions center around this major activity. The Federal Government owns all the land and dwellings, public buildings, schools, clubs, movies, the only dairy farm, and the one printing plant. Only employees of the United States may live in the Canal Zone and all employment is restricted to Government ventures. Food and clothing are sold to residents from Government-owned commissaries. Before the United States undertook to strengthen its defenses in 1940 there was considerable unemployment among the unskilled Negro workers. But with the advent of war this condition was removed. Recent data on shipping traffic, financial operations, and commerce were withheld for military reasons. See YEAR BOOK for 1943, p. 521.

Government. A civil government was authorized by Congress by the Panama Canal Act of 1912 and general supervision delegated to the Secretary of War. Administration rests, normally, in the hands of a Governor (in 1943, Maj. Gen. Glen E. Edgerton) who is appointed by the President for a period of four years. But in wartime the control of the Canal and the government of the Zone are under the authority of the commanding general of the Panama Canal Department, U.S.A. Subject to such superior authority the scope of government in this area goes much beyond the functions of government in the States and other Territories. The Governor is the superintendent of the Canal, and the president of the Panama Railroad. He has charge of relations with the Republic of Panama and supervises all the resources of the Zone. His duties can be compared to those of an executive in the efficient management of a vast business organization. The Executive Secretary, appointed by the governor, is responsible to him for the proper exercise of such governmental functions as fall within the scope of the police, fire, school, and civil affairs divisions. The administration of justice is carried on through the district court and two magistrate courts. A district attorney conducts all civil and criminal cases for the Federal Government and a United States marshal executes the processes of the district court. Judicial officers, with the exception of the magistrates, are appointed by the President.

CHARLES F. REID.

PAN AMERICAN HIGHWAY. See ECUADOR, PARAGUAY and each of the Central American republics, under *Transportation or History*.

PAN AMERICANISM. Inter-American solidarity in resisting Axis aggression was further extended during 1943. Chile finally severed diplomatic and economic relations with Germany, Italy, and Japan on January 20, a full year after the Rio de Janeiro Conference of American Foreign Ministers recommended such action. Chile's action left Argentina

as the only one of the 21 American republics maintaining relations with the Axis nations. Bolivia declared a state of war with the three principal Axis Powers on April 7 and Colombia declared war on Germany November 27. This raised to 14 the number of American republics at war with one or more of the Axis countries. See table under WORLD WAR for dates of war declarations and severances of relations by each republic.

The year also saw steady progress in the development of the program of military, political, and economic cooperation among the American republics agreed upon at the Rio de Janeiro Conference in January, 1942 (see 1943 YEAR BOOK, p. 522 f.). This program, based upon agreements and principles adopted at the Inter-American Conferences of 1933, 1936, and 1938 and the meetings of American Foreign Ministers at Panama in 1939 and Havana in 1940, called for joint action in combating Axis propaganda, espionage, economic penetration, and subversive activities. In return for such collaboration on the part of the other republics, the United States had pledged financial, technical, and economic aid in increasing the hemisphere's production of strategic materials, mobilizing shipping facilities for their transportation, and stimulating increased production and more equitable distribution of necessities among all the American peoples on a long-term basis. Finally, the program aimed at developing closer unity among the American governments in tackling postwar problems, particularly the problem of establishing a stable peace. See PAN AMERICAN UNION for a summary of steps taken to carry out this program during 1943.

The major achievements of the Pan American movement during 1933-43, and the resultant concrete assistance to the United States war effort, were set forth by Secretary of State Hull on December 14 in replying to an attack upon the Roosevelt Administration's "good neighbor" policy made by Senator Hugh A. Butler, Nebraska Republican. Mr. Hull's statement follows in part:

Beginning 10 years ago at Montevideo we of the Americas have built a cooperative relationship to increase our trade and raise our standard of life and to serve as a bulwark in the defense of our independence and freedom.

At Buenos Aires we established the procedure of consultation before the menace of overseas aggression. At Lima we proclaimed the solidarity of the Americas and our determination jointly to face common dangers to our security. After war broke out in Europe in 1939 we had two special meetings, one at Panama and another at Habana, where we concerted measures of mutual assistance. We agreed to consider an attack against one as an attack against all.

On December 7 attack came and with it the sternest test of inter-American solidarity. The other American republics realized that the Axis attack against the United States was only part of a plan to conquer the entire world. Now, 13 are in a state of war with the Axis, and 6 others have broken diplomatic relations with the Axis. Argentina alone has failed to act.

We in the United States are proud of our membership in the inter-American system through which the 20 American republics have so decisively met the challenge of our times. At the blackest moment of the war, during the meeting of Foreign Ministers at Rio de Janeiro, our sister republics raised their banners alongside ours. They opened their ports to our ships. They welcomed and quartered our troops on their soil. They devoted their mines, their forests, and their fields to the intensive production of strategic war materials. They rounded up Axis spies and saboteurs, and they shut off trade of benefit to the Axis. They cooperated in the defense of the Panama Canal and in the suppression of the submarine menace. All this and much more they did as their contribution to victory.

The plain truth is that without this cooperation the course of the war in highly essential strategic areas might have been different. For example, consider the situation in the Near East. When Rommel was hammering at the gates of Egypt it was planes and light-tank ammunition ferried by northeastern Brazil that helped turn the tide. The value to our cause of the use of these Brazilian airports and of the cooperation of the Brazilian Army and Navy cannot be overstated.

Overseas Expeditions Planned. In addition to the direct military aid cited by Secretary Hull, two of the Latin American republics—Brazil and Mexico—had virtually completed preparations by the end of 1943 for sending military expeditions overseas to join in the armed conflict. Brazilian divisions were scheduled to see action in Europe during 1944, while the Mexican Government announced plans to send military contingents to fight the Japanese in the Pacific.

The Inter-American Joint Defense Board, set up in 1942, continued its work of planning and coordinating measures for the defense of the continent (see *Bulletin of the Pan American Union*, July, 1943, p. 402, for a report on the Board's activities during its first year of operation). Meanwhile naval and air bases for joint use by the cooperating American republics in waging war against the Axis were completed in Brazil, Ecuador, and most of the other countries of the hemisphere. These bases were financed with U.S. lend-lease funds and defense appropriations by the United States and the Latin American governments directly concerned. All of the Latin American republics except Argentina received U.S. lend-lease aid in expanding, equipping and modernizing their armed forces.

Political Defense. Probably the most actively useful of all the hemisphere war agencies established by the Rio de Janeiro Conference was the Emergency Advisory Committee for Political Defense, with its headquarters at Montevideo (see under PAN AMERICAN UNION). Under the chairmanship of Dr. Alberto Guani, Vice President of Uruguay, this committee spent the first year of its labors (up to Apr. 15, 1943) preparing a detailed program of legislation designed to combat Axis political warfare, which it recommended for adoption by the individual American republics. With the substantial completion of this phase of its activities, the Committee early in 1943 followed up by sending groups of its members on tours of the American republics for direct consultation with responsible officials with regard to the application of political defense measures. In many cases, these visits led to the further tightening and extension of existing controls.

The major problem facing the Committee was the continuance of Axis political warfare throughout the continent from bases and with facilities left in the hands of Axis agents as a result of the Argentine Government's neutrality policy (see ARGENTINA under *History*). A memorandum drawn up by the U.S. Government and made public by the Committee on January 22 disclosed the existence in Argentina of a vast spy ring operating throughout South America under the direction and orders of the German Embassy in Buenos Aires. This memorandum was said to contain much of the information on Axis activities confidentially submitted to the Argentine Foreign Office by the U.S. Ambassador on Nov. 3, 4, and 10, 1942 (see 1943 YEAR BOOK, p. 43). The document was made public over the objections of the Argentine member of the committee and with the Chilean member not voting. It had a marked influence upon the development of anti-Axis opinion not only in Argentina but also in the other countries of the hemisphere.

Reporting on the Committee's activities before the Inter-American Joint Defense Board in Washington on January 25, Dr. Guani denounced radio propaganda broadcast from Berlin, Rome, and Tokyo as "one of the most powerful political weapons of our enemies." He recommended that "an efficient and energetic campaign should be carried out to counteract it"—a proposal subsequently acted

upon by the U.S. Office of War Information. In a recommendation adopted May 25, the Committee discouraged further repatriations of Axis nationals from the Western Hemisphere and stricter internment and detention measures as a means of preventing additions to the manpower at the disposal of the Axis nations.

The first annual report of the Committee issued in Montevideo July 31 declared that the repression of illicit activities by Axis agents was impossible so long as one American country maintained diplomatic relations with Germany, Italy, and Japan. The report warned that Allied victories had not eliminated the danger of Axis political aggression. It declared that a desperate enemy might still use political methods as an extremely effective weapon to weaken the war effort of the American countries. Substantiation of this danger came on November 12 when Dr. Guani reported an increase in subversive activities in South America. This increase coincided with the pro-Fascist trend of the Argentine military dictatorship established in June.

This disturbing development appeared likely to be duplicated in Bolivia, after pro-Axis and anti-democratic elements gained power through the military coup of December 20. On December 24 the Committee urged the American governments which had declared war or broken relations with the Axis powers "not to proceed to the recognition of a new government instituted by force, before consulting among themselves for the purpose of determining whether this government complies with the inter-American undertakings for the defense of the continent, nor before carrying out an exchange of information as to the circumstances which have determined the establishment of said government." In line with this proposal, none of the American governments recognized the new government in Bolivia, except Argentina.

For a detailed study of the Emergency Advisory Committee for Political Defense, see Karl Loewenstein, "Pan Americanism in Action," *Current History*, November, 1943, p. 229 f.

Economic Collaboration. Economic mobilization of Latin American resources to feed United States war industries and reciprocal economic aid from Washington to cushion the shock of war upon the economies of the other republics was carried on mainly through bilateral agreements (see each republic, under *History*, for details). The United States—in some instances with British collaboration—purchased virtually all the surplus strategic materials that the mines, farms, and forests of Latin America could produce. To increase the output of rubber, abaca, quinine, vegetable oil, insecticides, and other scarce commodities formerly imported from the Far East, Washington advanced funds, supplies, and technical assistance to Brazil and other tropical American republics. It assisted in the construction of roads, airports, and other public works needed to expand production of these commodities. It likewise cooperated in extensive campaigns against tropical diseases obstructing the progress of this emergency program.

Most of these projects had both a short-term and a long-term significance. The U.S.-Brazilian program for opening up the Amazon basin aimed at the immediate expansion of rubber production and also at the permanent economic development of that vast region. From the point of view of the increased amount of rubber collected in the Amazon area during 1943, the results were discouraging. Other significant economic development schemes were in progress in Haiti, Bolivia, and Ecuador.

U.S. governmental agencies also continued to

make large purchases of nonstrategic materials and to extend other financial assistance in order to support Latin American economies. Up to September, 1943, the U.S. Commodity Credit Corporation had bought some 10,600,000 bags of Brazilian coffee, most of which could not be moved for lack of shipping. War agencies in Washington contracted to buy cotton from Nicaragua, Haiti, and Peru; assisted Brazil, Mexico, Ecuador, and Colombia to stabilize their currencies; and advanced credits for roadbuilding in the Central American republics for strategic purposes and to relieve unemployment caused by the closing of banana and other markets in the United States.

The United States was also aiding in the development of Latin American manufacturing industries. In part, this aid was intended to relieve the strain upon Allied shipping—in the summer of 1943 only 16 per cent of the U.S. dry cargo tonnage was available to maintain the essential civilian economy of the United States and the other American republics. But it was also designed to lay industrial foundations for a long-range improvement in Latin American standards of living and thus to assure an expanding market for United States exports. As part of this program, there were in the United States at the end of 1943 over 200 recipients of industrial and trade scholarships from the other republics. They were studying North American production methods and acquiring other business and technical skills for future utilization in their own countries.

Additional bilateral economic accords were concluded during the year between various Latin American countries. Brazil granted Bolivia a free port in Santos. Argentina made the same concession to Paraguay at Buenos Aires and took preliminary steps toward customs unions with Chile and Paraguay. The Inter-American Financial and Economic Advisory Committee, established in Washington on Nov. 15, 1939, played an important role in weaving this new fabric of inter-American cooperation. It made studies and formulated recommendations for defensive and offensive economic warfare against the Axis powers and for the further development of inter-American production and trade.

See also Ernest S. Hediger, "Agricultural Cooperation in the Americas," *Foreign Policy Reports*, Sept. 15, 1943; Percy W. Bidwell, "Good Neighbors in the War, and After," *Foreign Affairs*, April, 1943, p. 524 f.; Office of the Coordinator of Inter-American Affairs, *Americas United* (1943); "Inter-American Health Plan," *Foreign Commerce Weekly*, May 29, 1943, p. 8 f.; report of Secretary of State Hull on activities of the Inter-American Financial and Economic Advisory Committee, *Department of State Bulletin*, Mar. 27, 1943, p. 260 f.

The Labor Problem. Because of its great need for Latin American strategic materials and the heavy financial investment made to obtain them, the U.S. Government was disturbed by the disquieting signs of unrest that developed among Latin American industrial workers. The killing of a number of striking miners by troops at the Catavi tin mines in Bolivia in December, 1942, threatened to interrupt the supply of tin to United States war industries. The State Department accordingly accepted an invitation from the Bolivian Government to send a mission composed of labor experts to Bolivia to study labor conditions and make recommendations for their improvement (see *BOLIVIA* under *History*). In various other ways Washington sought to prevent a deterioration of living standards in Latin America that would affect production of strategic

materials and play into the hands of Axis agitators. An improvement in the condition of the workers was declared an objective of the long-range development programs under way in Latin American republics with U.S. assistance.

The need for such action was demonstrated by the plans announced by the Federation of Latin American Workers for an Inter-American Economic Conference in 1944 in Mexico City to study proposals for raising living standards, spurring technical progress, mechanizing agriculture, opening up new fields of production, etc. The Federation, organized in 1938 by Lombardo Toledano, head of the radical Federation of Mexican Workers (CTM), claimed to represent 4,650,000 workers in 14 Latin American countries. When the CTAL Council met in Havana, Cuba, in July, 1943, to lay plans for the 1944 conference, the Cuban Socialist delegates withdrew on the ground that the Council was under overwhelming Communist domination.

Interchanges of Visits. In addition to the specific economic, political, and military activities described above, various other developments of the year tended to strengthen the ties binding the American republics together. Interchanges of visits by high governmental leaders continued. The Presidents of Bolivia, Paraguay, and Venezuela and the Vice President of Uruguay visited Washington and stopped at other American capitals en route. President Roosevelt conferred with President Vargas of Brazil at Natal in January and with President Avila Camacho of Mexico at Monterrey in April. From March 16 to April 24 Vice President Henry Wallace made an official tour of seven Latin American countries—Costa Rica, Panama, Chile, Bolivia, Peru, Ecuador, and Bolivia—where he was received with enthusiasm, particularly by the pro-democratic elements of the middle and lower classes.

Other visits were exchanged by a number of Latin American presidents and Foreign Ministers. Because of her non-cooperation in hemisphere defense, Argentina was excluded from the United Nations Food Conference at Hot Springs, Va., and omitted from Secretary Wallace's good-will tour. But the Argentine leaders sought to counter this coldness by actively wooing Chile, Bolivia, and Paraguay.

In addition to these exchanges of visits by government officials, there was a growing interchange of professors, students, professional men, and leaders of business, industry, and labor. Meanwhile the incessant round of specialized inter-American conferences continued. The second national and Pan American Press Congress was held in Havana in June. The Inter-American Bar Association met in Rio de Janeiro in August, and the Inter-American Demographic Congress in Mexico City in October (also see PAN AMERICAN UNION). The legations exchanged between the United States on one hand and Costa Rica, the Dominican Republic, El Salvador, Guatemala, Haiti, Honduras, and Nicaragua on the other were elevated to embassies under an agreement announced March 23.

Pan Americanism in Balance. By the end of 1943 it was clear that the Pan American movement had made a substantial contribution to the security and prosperity of the nations of the hemisphere and to Allied successes against the Axis. It was also recognized that the "good neighbor" policy of the United States was an important contributing factor to the success of Pan Americanism. At the invitation of the Cuban Senate, the diplomatic representatives of all 20 Latin American countries in Washington presented to President Roosevelt on June 30,

through the governing board of the Pan American Union, a resolution commending the "good neighbor" policy.

On the other hand, there were attacks upon the Pan American movement and the "good neighbor" policy from three sources—Axis propagandists, Latin Americans who were either pro-Axis or who feared Pan Americanism as a screen for United States imperialism, and opponents of the Roosevelt Administration in the United States who sought to make political capital from criticisms of its activities in Latin America (see UNITED STATES under *Foreign Relations*).

Some of the Latin American governments that had severed relations with the Axis powers were slow in adopting and enforcing the measures against the Axis recommended by inter-American conferences and agencies. There was also some criticism in Latin America of the failure of the United States to supply the shipping and the materials necessary to provide that region's vital import needs. But the fear that the war would bring economic catastrophe to Latin America was largely removed by heavy United States purchases (see TRADE, FOREIGN).

The general manager of the airport construction division of Pan American Airways revealed on April 10 that scores of airports were nearing completion, linking the United States with the bulge of Brazil via both the Caribbean islands and Central and South America. Spaced at 500-mile intervals in the jungle, these airports were designed to serve as emergency landing fields and refueling stops for the stream of U.S. bombers, military transports, and commercial airliners flying to the fighting fronts and military and commercial centers in other parts of the world.

Axis propagandists spread allegations that the United States was seeking permanent footholds in Latin America by retaining control of airports and military-naval bases it had helped to build there for emergency war purposes. In a sweeping denial of this charge issued March 6, Acting Secretary of State Sumner Welles gave assurances that the United States had no intention of holding these bases in the Western Hemisphere permanently. Yet suspicion of the ultimate purposes of the United States remained in many parts of Latin America, particularly in Argentina and among the uneducated masses in Mexico. There was a fairly widespread fear that the "good neighbor" policy would not outlast the Roosevelt Administration.

Another trend disturbing to many Latin Americans was the tendency in some North American circles to support a Pan American regional bloc under United States leadership as a substitute for a world organization to maintain peace and advance general prosperity. However Under Secretary of State Welles, Nelson Rockefeller, Coordinator of Inter-American Affairs at Washington, and other spokesmen set forth the Administration view that the Pan American movement was not a substitute for world cooperation but pointed the way toward an over-all organization.

See CHILDREN'S BUREAU; COORDINATOR OF INTER-AMERICAN AFFAIRS; EDUCATION; EXPORT-IMPORT BANK; UNITED STATES under *Foreign Relations*; and each of the Latin American states under *History*.

RONALD STUART KAIN.

PAN AMERICAN PRESS CONGRESS. See PAN AMERICANISM under *Interchanges of Visits*.

PAN AMERICAN SANITARY BUREAU. See PAN AMERICANISM.

PAN AMERICAN UNION. The Pan American Union is an official international organization founded in 1890 as the International Bureau of American Republics and maintained by the 21 republics of the Western Hemisphere for the development among them of good understanding, friendly intercourse, commerce, and peace. It is controlled by a Governing Board, composed of the Secretary of State of the United States and the diplomatic representatives in Washington of the other republics, and is administered by a Director General and an Assistant Director chosen by the Board. The Union publishes a monthly *Bulletin* in three editions, English, Spanish, and Portuguese, as well as numerous special reports on the countries which are members of the Union. The Pan American Union acts as the permanent organ of the International Conferences of American States which meet at intervals of five years. The last or Eighth of these Conferences was held at Lima, Peru, Dec. 9-27, 1938. On recommendation of the Colombian Government, the Governing Board on Jan. 6, 1943, indefinitely postponed the Ninth International Conference, which was scheduled to open in Bogotá the following December.

During 1943 the Pan American Union and the special agencies which it had created for the purpose, continued to give preferential attention to the problems confronting the American republics as a consequence of the war. The Inter-American Defense Board, established at Washington and composed of military, naval and aviation representatives of the 21 republics, continued their consideration of problems relating to the defense of the Continent. The Emergency Advisory Committee for Political Defense, organized in Montevideo to meet the problems of subversive activities in the American republics, prepared a series of basic recommendations and in 1943 made visits to several countries for the purpose of working out plans with national officials for putting these recommendations into effect. National committees on political defense have been set up in most of the countries of the Western Hemisphere.

The Inter-American Financial and Economic Advisory Committee, which was organized at the Pan American Union in 1939 immediately following the outbreak of the war, gave major consideration to implementing the economic resolutions adopted at the Meeting of Ministers of Foreign Affairs held at Rio de Janeiro in 1942. The coffee marketing agreement, whereby the United States market was divided among the 14 coffee exporting countries of Latin America on the basis of their proportionate share of total production, was extended for another year to October, 1944.

Postwar problems also began to receive consideration. The preliminary recommendation on postwar organization formulated by the Inter-American Juridical Committee of Rio de Janeiro was transmitted for observation and comment to the Governments of the American Republics, several of which appointed national committees on postwar plans. The Executive Committee on Postwar Problems of the Governing Board of the Pan American Union prepared a report setting forth the basic principles of the inter-American system and undertook a study of recent trends in inter-American economic cooperation. The Inter-American Financial and Economic Advisory Committee appointed a special subcommittee to formulate plans for the Inter-American Technical Economic Conference which was to consider present and postwar economic problems confronting the republics of the American Continent.

At the meeting of the Governing Board of the Pan American Union held on Nov. 3, 1943, the Secretary of State of the United States was re-elected Chairman of the Board for the ensuing year. Julian R. Cáceres, Ambassador of Honduras, was at the same time elected Vice Chairman to succeed Luis Fernando Guachalla, Ambassador of Bolivia. Headquarters of the Union are at the Pan American Building, Washington, D.C.; L. S. Rowe, Director General; Pedro de Alba, Assistant Director.

PANELING BOARDS. See FEDERAL BUREAU OF INVESTIGATION.

PANTELLERIA. An Italian island (32 sq. mi.; pop., 9,000) in the Mediterranean 45 miles from the coast of Tunisia and 62 miles from the Sicilian coast. Strategically situated to dominate the shipping route between the eastern and western Mediterranean, it was fortified by Italy during the crisis of 1935-37 in Anglo-Italian relations. The island has two small ports and was said to be equipped for use as an auxiliary air and submarine base (see map, YEAR BOOK for 1938, p. 360). On June 11, 1943, the Italians surrendered the island to Allied armed forces following heavy air and naval bombardment. Governor, Brig. Gen. Aubrey C. Strickland (appointed June, 1943). See WORLD WAR.

PAPER AND PULP. A pulp shortage of serious proportions developed in 1943 after the industry had been forced to make up a growing deficit between new production and requirements from inventories since the second half of 1942. Growing manpower shortages in the woods were directly responsible for the tightening in supplies since the flow of pulp wood to mills declined sharply both in the United States and in Canada. In an attempt to fight the growing crisis at its source, lumber, pulp, and paper controls were coordinated in the War Production Board, first through the appointment of a coordinator in the person of Harold Boeschstein, and later in the organization of a special Forest Products Bureau within the War Production Board. Thus far, relief has been slow in forthcoming, however as a result paper consumption in 1944 will have to be curtailed much more sharply than heretofore.

This is due primarily to an important war-induced shift from paper production to paperboard output. While normally total paper production is substantially larger than paperboard output, this picture was reversed in 1943. Production schedules for the first quarter of 1944 allow for a ratio of 53 per cent paperboard and 47 per cent paper, compared with 45 per cent paperboard and 55 per cent paper in the fourth quarter of 1942. This trend indicates the increasing use of paper production for direct and indirect war purposes.

An extensive study of the United States and Canadian pulp and paper situation was made in 1943 by the Combined Pulp and Paper Committee, the so-called Adams Committee, which worked under the auspices of the Combined Production and Resources Board as well as the Combined Raw Materials Board. This Committee after several months of study submitted a preliminary report in October, 1943, containing the conclusion that a large deficit of wood pulp in 1944 could be avoided only by immediate steps to increase the supplies of manpower in the woods. In terms of pulpwood, the shortage for 1944 was estimated at 6,500,000 cords of wood by this committee.

Pulp and paper prices increased approximately 6 per cent during 1943. The Bureau of Labor In-

dex for this commodity group stood at 100.1 of its 1926 average in January, 1943, and registered 105.8 for November.

Pulpwood. The pulpwood supply for the paper and paperboard industry reached a critical level in 1943. Despite the fact that over-all receipts showed some improvement toward the end of the year, receipts for the full year, 1943, including imports from Canada, according to the Forest Products Bureau, were 12 per cent below the like period of 1942, or 14,814,000 cords as compared with 16,712,000 cords in 1942. Consumption of pulpwood also was cut approximately 10 per cent under the 1942 level, but still exceeded new supplies by a substantial margin, so that pulpwood inventories at United States mills declined to a low point of 2,807,000 cords at the end of November, 1943, as compared with 3,616,000 cords a year earlier. The lowest point for the year was reached in June when pulpwood inventories at mills dipped to 2,300,000 cords.

One of the actions responsible for the moderate increase in new supplies toward the end of the year was the Victory Pulpwood Campaign under American Newspaper Association sponsorship which was conducted under the motto of "Cut a Cord For Every Boy In The Service," which was concluded December 11. The campaign for increasing the output of pulpwood, however, will be continued in 1944 by the War Activities Committee of the Pulpwood Consuming Industries with the expected cooperation of 1,400 weekly and small daily newspapers in the pulpwood producing areas.

The combined pulpwood supply (United States and Canada) in 1943, i.e. new supplies plus inventories, was estimated at 23,619,000 cords by the Adams Committee. Canada also conducted a pulpwood production publicity campaign last year. Late in the year arrangements were completed for the employment of 500 Italian prisoners of war in Northern New York. Further possibilities of use of prisoners of war in pulpwood operations are in prospect.

The 1944 domestic pulpwood goal has been set at 14,000,000 cords. Requirements have been stepped up further for packaging materials, especially weatherproof paper and kraft board for packaging and shipping munitions, foods, medical, and other supplies to foreign battle fronts and for containers for agricultural as well as other civilian supplies.

Wood Pulp. Domestic wood pulp production in 1943 dropped to 9,075,000 short tons as compared with 10,228,000 tons in 1942, when an all-time peak was established. The 1943 production by grades was as follows:

	1943	1942
Bleached Sulfite	1,575,000*	1,718,000
Unbleached Sulfite	885,000	1,212,000
Bleached Sulfate	750,000	812,000
Unbleached Sulfate	3,515,000	3,914,000
Soda	415,000	453,000
Semi-chemical and chemical screenings	255,000	226,000
Mechanical and mech. screenings ..	1,680,000	1,893,000
Total, All Grades	9,075,000	10,228,000

* Including 300,000 tons dissolving pulp for rayon manufacture.

Imports of wood pulp from Canada in 1943 totaled 1,270,000 tons compared with 1,200,000 tons in 1942. Exports in 1943 reached 270,000 tons, as compared with 214,807 tons in 1942.

Total consumption of wood pulp in 1943 was 10,525,000 tons or 450,000 tons in excess of new production. Consumption in 1942 had amounted to 11,047,906.

For the first quarter of 1944 the Forest Production Bureau has authorized the use of 865,000 tons of pulp per month. This will support an average minimum monthly production of paper and paperboard of 1,398,837 tons. Paper mills had proposed an average monthly production of paper and paperboard of 1,534,000 tons for the first quarter of 1944 which would have required about 977,000 tons of wood pulp monthly.

Waste Paper. Waste paper inventories also showed a marked shrinkage in 1943. At the end of November, 1943, they stood at 493,000 short tons as compared with 861,000 a year earlier. Low receipts of waste paper showed a gradual improvement since September. The results of the new large-scale salvage campaign had not made themselves felt by the end of the year. For the 11 months period of January through November, 1943, receipts of waste paper at United States paper and paperboard mills totaled 5,535,763 short tons. Comparable figures for 1942 are not available. The demand for waste paper is so keen that the Office of Price Administration (q.v.) developed a special program to eradicate black market operations in the waste paper industry through an amendment to MPR-30 designed to tighten the regulation governing waste paper sales. (See WAR PRODUCTION BOARD under *Salvage*.)

Paper and Paperboard. Paper and paperboard products in 1943, according to figures compiled by the American Paper and Pulp Association, reached a total of 17,036,144 tons as compared with 16,888,646 in 1942 and 17,762,365 in 1941. Paperboard production increased to 8,591,177 as compared with 7,773,968 in 1942.

Paper production by major categories showed the following trend in 1943:

	(In thousands of tons)		
	1943	1942	1941
Total All Grades	17,036	16,888	17,762
Newsprint	812	967	1,043
Groundwood Printing and Specialty (50% groundwood or more) hanging, catalog and directory, rotogravure	582	610	642
Book (includes all book with less than 50% groundwood) general printing, converting, offset	1,605	1,704	2,025
Fine—writing, including reproduction, other fine: cover, text, bristols, thin	1,010	1,055	950
Wrapping—unbleached sulfite, semi-bleached sulphate, bleached sulfite, bleached sulfate, unbleached sulfate; special industrial papers	2,501	2,713	2,778
Tissue—sanitary; toweling, toilet, napkin, facial tissue stocks; tissue other than sanitary, and thin waxing, wrapping, fruit and vegetable	969	981	912
Absorbent	88	64	61
Building	377	1,001	918
Miscellaneous Paper	—	16	28
Boards	8,591	7,773	8,399
Container	—	3,755	4,182
Folding Boxboard	—	1,711	1,841
Set-up Boxboard	—	996	1,238
All Other Boards	—	1,310	1,355

Note: AP&P figures may disagree slightly with WPB data due to some changes in reporting procedure.

Wrapping Paper. Production of wrapping paper in 1943 failed to equal the 1942 total by a substantial margin. The War Production Board announced that kraft wrapping paper in the coarse paper field in the third quarter of 1943 was reduced to a point approximately 40 per cent below the 1942 average and is taking a further reduction for the first quarter of 1944. Because of the acute shortage in paper making supplies, especially kraft pulp, an amendment to Conservation Order M-241-a was issued

on Dec. 18, 1943, which restricts the use of wrapping paper, including wrapping tissue in the manufacture of converted paper products during 1944 to approximately 65 per cent of the 1942 base period production.

Newsprint. Consumption of newsprint was cut several times during the year, the latest amendment bringing the total cut up to 25 per cent from the 1941 base period. The reduction is on a graduated scale, however, under which small publications fare considerably better than the large ones. The latest amendment to Limitation Order L-240 as amended on Dec. 24, 1943, became effective on Jan. 1, 1944. Newspaper publishers' quarterly consumption quotas will be calculated upon a base representing the tonnage used in printing their net paid circulation in the corresponding quarter of 1941, plus a 3 per cent allowance for production waste. This base will be adjusted for each newspaper to compensate for circulation increase in 1942 over 1941. Newspaper publishers who use less than 25 tons of print paper per quarter will continue to be exempt from reduction. Other publishers will be subject to a reduction of 4 per cent of their base tonnage over 25 tons but not over 125 tons; 8 per cent of the amount over 125 tons but not over 250 tons; 12 per cent of the amount over 250 tons but not over 500 tons; 20 per cent of the amount over 500 tons but not over 1,000 tons; and 24 per cent of the amount over 1,000 tons. WPB stated there was no possibility that these restrictions would be relaxed.

A special United States-Canadian joint committee of technical experts has been appointed to study the complex problems of both the pressroom and the paper mill. It was pointed out that all practical methods of conserving fibers must be carried out; and it was then indicated that the following four methods will be tried out, despite a probable increase in the cost of the newsprint: Reducing basis weight without increasing sulfite pulp content; adding mineral filler as a replacement of wood fiber; reducing sulfite pulp content by slowing down machines, if necessary, replacing sulfite pulp by ground wood; and replacing some of the new fiber with waste paper.

Representative Boren, Chairman of the House Newsprint Investigating Committee introduced a bill on Dec. 16, 1943, to exempt from tariff duty imported newsprint having a basis weight of 25 to 35 pounds per ream. The present tariff law exempts paper of 32-35 pounds.

Recently, experimental runs have been made by newspapers using paper containing different proportions of de-inked stock and other paper made with that waste that had not been de-inked. While there was some difference in brightness, it is reported that the various papers used seemed to be satisfactory from a newspaper-printing standpoint.

Paperboard. The demand for paperboard for packaging civilian and military supplies continued to grow throughout the year. Therefore production is to be held at approximately the same level as the third quarter of 1943 under current plans of the Forest Products Bureau of the War Production Board. This would mean an average monthly production of 732,568 tons.

To assure sufficient board to fill Government orders, the War Production Board on Nov. 13, 1943, issued Directive 1 to Conservation Order M-241, requiring each manufacturer of paperboard to reserve 35 per cent of each month's production subject to WPB instructions as to its use. This revision from 10 per cent to 35 per cent became effective on Dec. 1, 1943, and remained unchanged in the

amendment made to M-241 as of Dec. 30, 1943.

The War Production Board recently informed a joint meeting of three industry advisory committees that Government orders for boxboard, folding, and set-up boxes must be filled first and less essential demands met afterward. While solid fiber and corrugated shipping containers are essential for sending military supplies overseas, set up and folding boxes as inner containers are equally essential. It was stated that about 50 per cent of our food and over 14 per cent of military material require packing in folding or set-up boxes.

See NEWSPAPERS; MAGAZINES; PHOTOGRAPHY.

H. E. LUEDICKE.

PAPUA. A territory (formerly called British New Guinea) of Australia, comprising the southeastern part of the island of New Guinea (87,786 sq. mi.) and the Woodlark, Louisiade, Trobriand, and D'Entrecasteaux groups of islands (2,754 sq. mi.). Total area, 90,540 square miles; population (estimated) on June 30, 1940, 1,822 whites and 337,000 natives. Capital, Port Moresby, which had about 800 white residents in 1941.

Production, Trade, etc. Rubber, gold, copra, and desiccated coconut are the chief export products. On Jan. 1, 1941, about 63,609 acres were under cultivation. Sugarcane, breadfruit, sago, dyewoods, spices, ginger, nutmegs, and bananas are other products. Trade (year to June 30, 1941): imports £539,152; exports £492,775. There were no railways and only about 23 miles of roads in 1941. Port Moresby had air and steamship connections with Australia. Ocean-going shipping entering and clearing the ports in 1940-41 totaled 489,469 tons.

Government. Budget estimates (1940-41): revenue, £189,518; expenditure, £189,297; subsidy from Australian Government, £42,500. The civil government was headed by an Administrator, appointed by the Australian Government and assisted by appointive executive and legislative councils. It gave way to a military regime in 1942. See AUSTRALIA; WORLD WAR.

PARACON. See RUBBER.

PARAGUAY. An inland republic of South America. Capital, Asunción.

Area and Population. Area, about 169,266 square miles (61,647 sq. mi. east of the Paraguay River, and about 107,619 sq. mi. west of the river confirmed to Paraguay by the arbitral award of Oct. 10, 1938, which ended the Bolivian-Paraguayan dispute over the Chaco Boreal). The estimated population in 1941 was 1,040,420 (including some 8,000 Indians and 41,165 Paraguayans, Mennonites, and others in the Chaco). With the exception of the small white ruling class, the people are of mixed Spanish and Guarani Indian blood. Spanish and Guarani are the spoken languages; Spanish the language of government, commerce, and education. Chief cities: Asunción, the capital, chief port, and commercial center of Paraguay, had 119,608 inhabitants on Jan. 1, 1942; Villarrica, about 40,000; Concepción, 14,793; Encarnación, 14,425.

Education and Religion. In 1941 there were 1,600 public and private elementary schools with a combined enrollment of approximately 100,000. Elementary-school attendance is compulsory until the student completes the fourth grade or reaches 14 years of age. In public and private secondary schools 3,531 students were enrolled during 1941. The National University has facilities for the study of law, engineering, medicine, dentistry, pharmacy,

and surveying. Roman Catholicism is the established religion of the country, but freedom of worship is guaranteed other faiths.

Defense. Paraguay on Jan. 1, 1941, had a total of 98,450 men in the armed (land and air) forces, of whom 10,450 were in the active army (including 4,000 police), and 88,000 (estimated) in the trained reserves. The navy consisted of 2 armored river gunboats and 2 small converted merchant vessels armed with modern guns.

Production. Agriculture, lumbering, and stock raising are the main occupations. Yields of the main products, in metric tons except as noted, were: Quebracho extract, 49,079 in 1942; sugar, 11,350 short tons in 1942; rice, 7,404 in 1942; petitgrain oil, 151.4 in 1942 (exports only); canned meat, 15,394 in 1941; groundnuts, 18,821 long tons in 1941; yerba maté, 8,866 in 1941; tobacco, 9,279 in 1941; cotton, 27,350 bales in 1941. Fruits, mandioca beans, and sweet potatoes are grown for home consumption. Livestock in 1940 included 3,507,000 cattle, 205,501 horses, 195,264 sheep, 38,777 swine, 6,040 donkeys, and 5,210 mules. Textiles, shoes, leather goods, soap, furniture, matches, and cigarettes are the principal manufactures.

Foreign Trade. Merchandise imports in 1942 totaled 17,160,000 gold pesos (12,180,000 in 1941); exports, 16,536,000 gold pesos (15,156,000 in 1941). Leading 1941 exports (in gold pesos): Preserved meat, 3,389,616; quebracho extract, 2,906,895; cattle hides, 1,907,428; cotton fiber, 1,582,705; woods, 942,515; oil of petitgrain, 749,036; yerba maté, 708,324. Latin America supplied 59 per cent of the 1941 imports; United States, 19.6; Japan, 10.7; United Kingdom, 8.5. Of the 1941 exports of known destination, the United States took 19 per cent, Latin America 18.6, and United Kingdom 18.1.

Finance. Actual government revenues in 1941 were 664,042 gold pesos and 1,088,079,630 paper pesos (1,030,631 gold and 920,877,834 paper pesos in 1940). The budget estimates for 1941 were extended for the year 1942. They were: Receipts, 583,400 gold and 1,302,218,084 paper pesos; expenditures, 1,259,984 gold and 1,193,964,644 paper pesos. On Oct. 31, 1940, the foreign debt totaled 12,908,816 gold pesos; internal debt, 10,208,830 gold and 1,528,040,717 paper pesos.

The decree of Feb. 10, 1941, fixed the value of the Paraguayan gold peso at 175 paper pesos instead of the former rate of 159.09 paper pesos. On the same date the paper peso was pegged at 77 (instead of 70) to the Argentine paper peso, or 333 to the U.S. dollar. The peso was replaced by the guarani as the national currency by a decree issued Oct. 5, 1943. The guarani, equivalent to 100 of the former paper pesos, is divided into 100 centimos, making 1 centimo equal to the former paper peso.

Transportation. In 1942 Paraguay had about 713 miles of railways, with connections to Buenos Aires; over 3,800 miles of highways and roads; air lines connecting Asunción with Buenos Aires, Santos, and Rio de Janeiro; and steamship services to all ports on the Plata river system. Situated 950 miles from the sea, Asunción is accessible to river vessels of 12 foot draft at all times of the year. The Marshal Estigarribia Highway between Asunción and Villarrica, financed from the \$3,000,000 U.S. Export-Import Bank credit extended in 1939, was completed in 1943. The Government then contracted with a U.S. engineering firm for the construction of another \$2,000,000 arterial highway running from Asunción through the southwestern section of the republic.

Government. A state of siege, or modified martial

law, was in effect almost continuously from the outbreak of the Chaco War in 1932 through 1942. The Constitution of 1870 was suspended following the successful military revolt of Feb. 17, 1936. A Congress of 20 Senators and 40 Deputies (all Liberals) was elected Sept. 25, 1938, and on Apr. 30, 1939, Marshal José Félix Estigarribia (Liberal) was elected President, with the opposition National Republican (Colorado) party boycotting the polls in both instances. Congress resigned collectively Feb. 17, 1940, and the next day President Estigarribia assumed dictatorial powers. He appointed a committee of university professors to draft a new Constitution, which was promulgated Aug. 15, 1940, after ratification in a plebiscite (See YEAR BOOK for 1940, p. 582 for its provisions). President Estigarribia was killed in an airplane accident Sept. 7, 1940, and the Cabinet designated Gen. Higinio Morinigo, Minister of War, as Provisional President. On Nov. 30, 1940, he proclaimed the establishment of an absolute dictatorship. He dissolved the Liberal Party on Apr. 25, 1942, and on September 30 announced that he would continue in office for the 1943-48 term. For 1943 developments, see below.

HISTORY

Morinigo Re-elected. With himself as the only candidate and with all opposition rigidly suppressed, President Morinigo was re-elected for the 1943-48 term in balloting which took place every Saturday and Sunday from Jan. 16 to Feb. 14, 1943. During 1942 arrangements had been completed for the extension of the Morinigo dictatorship without opposition (see 1943 YEAR BOOK, p. 528). Violent interruption of this procedure was threatened on January 29 when Col. Rafael Franco, exiled former President-dictator, started to return to Paraguay from Uruguay "to take part in the election." At the request of the Morinigo Government, he was detained in Buenos Aires until the voting was completed.

Official returns indicated that Morinigo received 85 per cent of the votes cast, the other 15 per cent being discarded as invalid. However Colonel Franco declared that few persons bothered to vote in an election offering no choice of candidates. Asunción authorities announced that the voters also authorized the President to revise the constitution; he was empowered to appoint a commission to draft a new constitution which would then be submitted to a plebiscite.

Morinigo's inauguration took place on August 15. The only changes in his new Cabinet were the appointment of new men to the Agriculture and Education portfolios and the creation of the new Ministry of Industry and Commerce. This latter post was given on November 8 to Juan Felix Morales, who had recently returned to Paraguay after spending two years in the United States studying finance.

Foreign Relations. With a poverty-stricken population unable to support the state and with the government financially unable to develop the national economy, Paraguay was primarily dependent on foreign assistance for any advance toward a higher standard of living. The inter-American development program worked out by Pan American agencies and the competition for Paraguay's favor between her powerful neighbors, Argentina and Brazil, had produced economic advantages in previous years. So also had financial and technical assistance extended by the United States (see preceding YEAR BOOKS).

During 1943 further progress was made along this line. On May 4 President Morinigo arrived in Rio de Janeiro to repay the visit President Vargas

made to Asunción in 1941. The same day the Brazilian President followed the example of Argentina (see 1943 YEAR BOOK) and cancelled both principal and interest on the unpaid £40,000,000 war indemnity that Paraguay incurred under the treaty of Jan. 9, 1872. The two Presidents also discussed a project for extending the São Paulo railway to Concepción, Paraguay. Finally, a new trade and navigation treaty was signed. Later in the year it was announced that Brazil was aiding Paraguay in a food-expansion program.

Not to be outdone, Argentina on November 17 signed an unconditional and unlimited most-favored-nation commercial treaty with Paraguay embodying reciprocal tariff concessions and providing for an eventual customs union. Ratifications of this treaty were exchanged December 15 during an official visit by President Morinigo to Buenos Aires. At the same time numerous other agreements were signed aiming at closer Argentine-Paraguayan commercial and cultural relations. Paraguay was given free port facilities in Buenos Aires, where Paraguayan imports and exports could be stored or reloaded without payment of Argentine tariff duties. Other accords provided for the improvement of postal facilities between the two countries, for the appointment of a mixed committee to study a customs union, for the extension to Asunción of an airline to be opened between Buenos Aires and Iguazu, and for the elimination from Argentine and Paraguayan school textbooks of anything that might "foster aversion for any American country." Moreover the Argentine Government issued a decree authorizing the National Roads Administration to rush the completion of the Argentine section of the Pan American Highway, which was to connect Asunción with Buenos Aires.

Morinigo rounded out his contacts with neighboring Presidents by paying a state visit to President Peñaranda in La Paz, Bolivia, in July. On November 14 the two Presidents, their Foreign Ministers, and Chiefs of Staff met again on the recently delimited Bolivian-Paraguayan frontier in the Chaco. They erected a cross to the Chaco war dead of both sides at Camatindi and then proceeded to Villa Montes, Bolivia, where several commercial conventions were signed. One of these authorized construction of a pipeline to carry Bolivian oil across the Paraguayan Chaco to the Paraguay River.

U.S.-Paraguayan Relations. Accompanied by several Cabinet Ministers and army officers, Morinigo also joined the list of Latin American Presidents visiting Washington. Arriving there as the guest of President Roosevelt on June 9, he addressed both houses of Congress the next day, reaffirming Paraguay's solidarity with the United Nations. After visiting New York City and war industries in Detroit and Buffalo, he returned home by the west coast with stopovers for state visits to Mexico City, Lima, La Paz, and other capitals along the route. Spurred by the growing difficulty of supplying Paraguay's import needs from Argentina, President Morinigo while in Washington agreed to the opening of negotiations for the conclusion of a reciprocal trade pact between the two countries. Other results of his visit were seen in the conclusion on October 27 and December 10, respectively, of agreements for sending a U.S. military aviation mission and a military mission to Paraguay, each to serve for four years.

See ARGENTINA, BOLIVIA, BRAZIL under *History*; WORLD WAR.

PARITY PRICES. See AGRICULTURE.

PARKS. See NATIONAL PARKS AND MONUMENTS.

PAROLE. See PRISONS, PAROLE, AND CRIME.

PARTISANS. See YUGOSLAVIA under *History*.

PATENT OFFICE, U.S. Cooperation of the Patent Office with the War and Navy Departments, the War Production Board, the Petroleum Co-ordinator, the Office of Scientific Research and Development, and other agencies of the Government in evaluating and safeguarding inventions of military character continued during the twelve months ended Nov. 30, 1943. By authority of an act (Public No. 700) passed by the Seventy-Sixth Congress all applications for the patenting of inventions and discoveries likely to prove useful for the war were preserved in secrecy. In the period from Dec. 1, 1942, to Nov. 30, 1943, there were issued 3,673 secrecy orders. In all, 7,122 applications have been subjected to such restrictions since the passage of Public No. 700. Between July 1, 1940, and Nov. 30, 1943, more than 250,000 applications were evaluated and a large number of inventions of military importance were disclosed to the Army and the Navy.

Of great significance to the Patent Office and to inventors and industry were the recommendations of the National Patent Planning Commission. This Commission, established by the President on Dec. 12, 1941, while recognizing and advocating preservation of the fundamental principles and the economic and social advantages of the system, proposed betterments in the conditions and processes concerned with the grant and adjudication of patents. One of its major recommendations is that for a single court of patent appeals.

In the fiscal year ended June 30, 1943, receipts of the Office were \$3,563,616 and expenditures \$4,610,780. In the period from Dec. 1, 1942, to Nov. 30, 1943, applications for mechanical patents, accompanied by fees, were 43,866. There were received 952 applications exempt from fees. Applications for reissue patents were 197 and for design patents 2,933. In the same interval patents granted for mechanical inventions, compositions, etc., were 31,987, for designs 2,292, and for plants, 52.

See ALIEN PROPERTY CUSTODIAN; LAW under *Supervision of Federal Agencies*.

CONWAY P. COE.

PATROL CRAFT. See NAVAL PROGRESS under *Submarine Warfare*.

PAW. See PETROLEUM ADMINISTRATION FOR WAR.

PAY-AS-YOU-GO LEGISLATION. See TAXATION; STATE LEGISLATION under *Taxation and Finance*.

PAYROLLS. Compare BUSINESS REVIEW under *National Income*; LABOR CONDITIONS under *Wages*.

PBA. See PUBLIC BUILDINGS ADMINISTRATION.

PEABODY CONSERVATORY. See MUSIC.

PEACE AIMS. See AXIS POWERS; UNITED NATIONS.

PEACE FEELERS. See BULGARIA, FINLAND, GERMANY, ITALY, HUNGARY, RUMANIA, under *History*.

PEANUTS. See AGRICULTURE under *Production*; HAY.

PEAS. See AGRICULTURE under *Production*.

PEMBA. See ZANZIBAR PROTECTORATE.

PENANG. See BRITISH MALAYA.

PENICILLIN. For manufacture, see CHEMICAL INDUSTRIES; CHEMISTRY under *Drugs*; for use, see MEDICINE.

PENNSYLVANIA. A middle Atlantic State. Area: 45,333 sq. mi. Population: 9,900,180 (1940 census); 9,513,272 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which

appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Edward Martin (Rep.), inaugurated in January, 1943, for a four-year term; Lieutenant Governor, John C. Bell, Jr.; Secretary of State, Charles M. Morrison; Attorney General, James H. Duff.

See SANITATION; TUNNELS; WATER SUPPLY.

PENOLOGY. See PRISONS, PAROLE, AND CRIME CONTROL.

PENSIONS. See the topics listed under OLD-AGE and VETERANS. For Widows' Pensions, see SOCIAL SECURITY BOARD under Old-Age and Survivors Insurance.

PENTOTHAL. See CHEMISTRY under Drugs.

PEPTIC ULCER. See PSYCHIATRY.

PERAK. See BRITISH MALAYA.

PERIM. See ARABIA under Aden.

PERLIS. See BRITISH MALAYA.

PERMANENT CENTRAL OPIUM BOARD. See NARCOTICS DRUG CONTROL.

PERMANENT CHARITY FUND. See PHILANTHROPY under Foundation Activities.

PERMANENT COURT OF INTERNATIONAL JUSTICE. See WORLD COURT.

PERMANENT JOINT BOARD ON DEFENSE (United States and Canada). A Board set up by President Roosevelt and Prime Minister W. L. Mackenzie King in pursuance of a joint communique dated Aug. 17, 1940, to "commence immediately studies relating to sea, land, and air problems including personnel and material" and "consider in the broad sense the defense of the north half of the Western Hemisphere." The Chairman of the U.S. Section is Fiorello H. LaGuardia, Mayor of New York, and of the Canadian Section, O. M. Biggar, K.C.

PERSIA. See IRAN.

PERSONALITIES. See the country or the subject to which they pertain; NECROLOGY.

PERSONAL LIBERTIES. See LAW under Decisions Concerning Personal Liberties.

PERU. A republic on the Pacific coast of South America. Capital, Lima.

Area and Population. Area, 482,258 square miles, subject to change when delimitation of the Ecuadorian-Peruvian boundary is completed in accordance with the agreement of Jan. 29, 1942 (see 1943 YEAR BOOK, p. 202 f.). The census of June 9, 1940, showed 7,023,111 inhabitants (6,207,967 actually enumerated and 815,144 added to cover the estimated number uncounted and possible omissions). Of those actually counted, 3,067,868 were men and 3,140,099 women. There were 3,283,360 whites and mestizos, 2,847,196 Indians, 41,945 Asiatics, 29,054 Negroes, 6,412 unclassified, and 815,044 others. The 1943 population was estimated at 7,395,687. Populations of the chief towns (1940 census for the first two; 1940 estimates for the

rest): Lima, 522,826; Callao, 69,601; Arequipa, 46,000 in 1936; Cusco, 44,080; Trujillo, 33,435; Chiclayo, 31,609; Iquitos, 29,778; Piura, 28,603.

Defense. Military service is compulsory, but the number of conscripts is limited. As of Jan. 1, 1941, the active army was estimated at 14,551; trained army reserves, 470,895; active air force, 1,935 with 100 planes; police and gendarmerie, 8,000. The navy comprised 2 obsolete cruisers, 4 torpedo boats, 4 submarines, 7 river gunboats, and 3 auxiliary craft. The armed forces were instructed by U.S. naval, aviation, and military missions.

Education and Religion. Approximately one-half of the population is illiterate. Elementary education is free and compulsory for students between the ages of 7 and 14. The organic law of Apr. 1, 1941, provided for sweeping reform of the educational system in the direction of vocational and practical instruction. In July, 1942, there were 6,037 primary schools and 22 rural schools, with a total of 11,052 teachers—an increase of 1,400 schools and 2,343 teachers since 1940. There were also 180 secondary and vocational schools, and 5 universities. The Roman Catholic religion is protected by the state and only Roman Catholic religious instruction is permitted in state and private schools.

Production. Agriculture supports about 80 per cent of the population, but mineral products accounted for 50.6 per cent of all 1941 exports against 40.2 per cent for agricultural products. Yields of the chief crops were (in metric tons): Cotton, 151,800 in 1942; sugar, 500,000 in 1942; wheat, 107,500 in 1941; hulled rice, 101,364 in 1941. As a result of the war, the cotton acreage was reduced 30 per cent by 1942. Abandoned cotton lands were used for dairy production and particularly for flax which increased its acreage to about 15,000 hectares (hectare equals 2.47 acres) and produced a 1942 crop valued at about \$5,000,000. Corn, potatoes, beans, barley, and quinoa are grown for local consumption. Coffee (q.v.) and fruit cultivation is important. War demands caused greatly expanded production of forest products, especially rubber, balata, cinchona bark, vegetable ivory, and lumber. The first livestock census ever taken in Peru (1942) showed 2,300,000 cattle, 13,750,000 sheep, and 490,000 horses. Wool production in 1942 was 11,336 metric tons.

Petroleum production in 1942 was 1,812,000 metric tons (1,584,000 in 1941); bituminous coal, 120,000 metric tons. Gold exports in 1942 were 8,161,219 grams; silver, 437,885 kilograms; copper, 35,139 metric tons; lead, 43,409 metric tons; zinc, 26,421 metric tons; antimony, 1,454 metric tons; bismuth, 346 metric tons; tungsten trioxide, 222 metric tons; molybdenum sulphide, 324 metric tons; vanadium pentoxide, 1,804 metric tons. The chief manufactures include petroleum products, cotton textiles, knit goods, hats, food products, beverages, leather, shoes, matches, etc. Construction of a steel mill with a capacity of 100,000 tons annually was arranged for with U.S. aid in 1942 (see 1943 YEAR BOOK, p. 532).

Foreign Trade. Imports in 1942, including bullion and specie, totaled 333,360,000 soles (357,821,403 in 1941); exports, 507,480,000 soles (494,095,283 in 1941). Values of the chief 1941 exports: Cotton, 125,266,000 soles; petroleum and its products, 112,176,000 soles; copper bars (containing large amounts of gold and silver), 64,565,000 soles; sugar and its products, 60,246,000 soles; wools, 20,574,000 soles. The United States took 43.5 per cent of the 1941 exports (42.8 in 1940); Japan, 16.7 (7.8); Chile, 11.6 (10.1); Argentina, 5.4 (5.0). Of the 1941 imports, the United States sup-

plied 62.5 per cent (53.1 in 1940); Argentina, 7.7 (7.8); Great Britain, 5.1 (9.2); Chile, 4.5 (1.9).

Finance. The accompanying table shows estimated and actual ordinary receipts and expenditures and the total public debt for the years 1932-42. It excludes extrabudgetary receipts and expenditures, and those arising under special laws or from credit operations.

ORDINARY BUDGET ACCOUNT
(In millions of soles)

Year	Revenues		Expenditures		Public Debt Dec. 31
	Budget	Actual	Budget	Actual	
1932.....	96.9	86.5	96.9	95.9	551.6
1935.....	131.3	139.7	131.3	137.6	690.4
1936.....	139.7	159.6	139.7	155.1	706.7
1937.....	153.6	172.9	153.6	168.0	723.7
1938.....	165.5	184.5	165.5	183.5	778.3
1939.....	174.7	179.9*	174.7	185.0	833.1
1940.....	183.0 ^b	184.6	188.0	194.5	905.5
1941.....	214.2	218.8*	214.2	218.8*	925.8*
1942.....	250.5*	....	250.5*	....	....

* Of which 170.3 million was collected in the period January-December and 9.6 million in the liquidation period, January-March, 1940, according to final figures. ^b Excluding 28,000,000 soles of revenues and expenditures under special laws, brought into the budget for the first time in 1940. ^c Preliminary figures through December, 1941, including income of 10,700,000 soles collected during liquidation period early in 1942. ^d As of June 30, 1941. ^e Excluding estimated receipts under special laws, amounting to 75,000,000 soles.

The average exchange rate of the Peruvian sol remained at \$0.1538 in 1941, 1942, and 1943.

Transportation. During 1941-42 a total of 907 miles of new roads were completed, bringing the length of passable highways to over 16,000 miles. The Central Highway from Lima across the Andes to Pucallpa on navigable waters of the Ucayali River was completed in September, 1943, opening up vast undeveloped regions in Eastern Peru. There are about 2,760 miles of railway lines. New lines to the Yauricocha copper district and to the new port of Matarani were under construction in 1943. Air lines operating in Peru carried 28,538 passengers, 609,807 kilograms of freight, 67,486 kilograms of mail, and 16,303 kilograms of parcel post in 1941. In 1940 9,635 vessels of 11,159,846 tons entered Peru's ports.

Government. The Constitution of Apr. 9, 1933, as amended by the plebiscite of June 18, 1939, vested executive power in a President elected for six years and ineligible for reelection. Legislative authority was vested in a Senate of 48 and a Chamber of Deputies of 140 members, all elected for six years. The suffrage in national elections is restricted to literate males of 21 years and over. President in 1943, Dr. Manuel Prado y Ugarteche, who was elected Oct. 22, 1939, and inaugurated December 8. Most of the Government candidates for the Senate and Chamber of Deputies were successful in the 1939 elections as the strongest opposition group, the so-called Apra party, was forbidden to present candidates (see 1939 YEAR BOOK, p. 609).

HISTORY

Political Developments. The internal political situation in Peru remained relatively quiet during 1943, but with a Presidential election scheduled for May, 1945, interest in potential candidates quickened toward the end of the year. President Prado was ineligible to succeed himself, but there was talk of amending the constitution to permit an extension of his term as an emergency war measure.

The outlawed A.P.R.A., or American Popular Revolutionary Alliance, led by Victor Raúl Haya de la Torre carried on an underground agitation for recognition of its right to participate in the

1945 elections. Moreover a small liberal bloc in Congress late in 1943 demanded repeal of the legislation curbing free political discussion, which had been introduced by President Luis Sanchez Cerro in 1932 and by President Oscar Benavides in 1939. The Lima press, restive under prolonged censorship, came out in support of this demand. However the regular session of Congress adjourned on November 25 without taking remedial action.

Religious Controversy. A closely related controversy meanwhile had arisen over the growing interference by some members of the Roman Catholic clergy and government officials with the religious activities of Protestant missionaries and laymen. The 1939 decree authorizing government control of the press had been used by the Catholic "Eucharistic Crusade" movement to justify the breaking up of Protestant meetings. In the spring of 1943, 27 Peruvian Protestants submitted to President Prado a written complaint on behalf of the 80,000 Protestants in the country. They charged the Archbishop of Lima with "open incitement to the persecution of Protestantism" in a pastoral letter dated Mar. 17, 1942, and declared that "some elements in the police force lend their aid to this plan of persecution by prohibiting the religious activities of Protestantism, imprisoning the Evangelist preachers, even maltreating them."

Numerous Spanish priests of pro-Franco sympathies were said to have played a leading part in fanning hostility and intolerance toward Protestants and even toward North American Roman Catholic missionary-priests in Peru. The Seventh Day Adventists complained that they were encountering serious obstruction of their work for the first time since they entered the Peruvian field 30 years before. Their school in Lima, open for 20 years, was closed by a government decree on the ground that the co-educational system followed was "immoral."

The demand for observance of the constitutional guarantees of freedom of religion was brought before Congress in October through petitions introduced in both houses by five Senators and 10 Deputies. They requested more energetic action by the Minister of Interior and Police to prevent subordinate authorities from "continuing to commit abuses against the Evangelists." They also asked that all other needed steps be taken to insure the free exercise of religion, and that the Minister of Foreign Relations and Religion end the alleged practice of Peruvian Consuls in the United States of withholding visas from Protestant missionaries desirous of going to Peru. In response to this petition, the Minister of Interior and Police advised the Senate that orders had been given to the police and Civil Guard throughout the republic to give the Protestant minority the required protection.

Prado's Tour. In September President Prado made a 16-day tour of the newly opened trans-Andean districts of the republic. On September 7 he officially inaugurated the Tingo Maria-Pucallpa section of the trans-Andean automobile highway linking Lima with the navigable rivers of the Amazon Basin. He was accorded an elaborate reception upon his return to the capital on September 18. Two newly created Cabinet posts—the Ministries of Aviation and Agriculture—were filled by Presidential appointment on January 3.

National Library Burned. A scandal arose in connection with the fire that destroyed the National Library in Lima on May 10. An invaluable collection of 100,000 rare volumes and 40,000 irreplaceable manuscripts dating in some cases from the

Spanish conquest was almost entirely consumed. Damage was estimated at \$750,000. A Congressional committee appointed to investigate the fire reported on September 30 that it was a case of deliberate arson. At the same time it was brought out that many valuable documents from the library had turned up in the United States and Argentina; presumably they had been stolen and sold at high prices. Moreover efforts to catalogue the contents of the library had met with strong opposition from some of its officials. These circumstances led some leading Peruvians to charge that the former director of the library had set fire to the building to prevent disclosure of alleged thefts.

Economic Conditions. In his annual message to Congress on July 28, President Prado reported that the serious threat to the nation's financial stability arising from the loss of normal export markets through war developments had been overcome by the reciprocal trade treaty of May 7, 1942, and the other economic accords concluded with the U.S. Government during 1942 (see 1943 YEAR BOOK). The strong financial position of the republic was reflected in the 1943 budget of some 400,000,000 soles, which represented an increase of 70,000,000 soles over 1942. This increase, provided for by heavier taxes on business profits and incomes, was expended for additional public works and larger appropriations for national defense, health, and education.

The failure of the 1941-42 rice crop and the scarcity of other foodstuffs led to a serious food shortage in Lima early in 1943 and a rapid rise in the cost of living. The Government took steps to remedy this situation in April. A new Minister of Agriculture was appointed in the person of Godofredo Labarthe. The entire rice and bean crops were placed under Government control and retail prices fixed for both staples. On recommendation of a special commission, cotton acreage was reduced 20 per cent by Government decree and it was made compulsory to plant 40 per cent of the farmlands in the Department of Lima with subsistence crops. Various other measures were adopted to increase food production.

While the food shortage in Lima was alleviated during May, speculation and inflation in staple commodities continued. This led the Government on August 27 to place maximum ceiling prices on all imported and domestic commodities sold in Peru. The Price Control Office was authorized to fix price ceilings at the level prevailing during the month of April; to limit profits of merchants or industrialists; and to regulate the price of imported articles when cleared through the customs.

The opening in Peru on July 23 of the first rubber tire factory on the west coast of South America was an important contribution to the restoration of normal economic conditions. Lack of tires had laid up a large proportion of the motor trucks upon which Peru's domestic commerce was largely dependent. Operating with Peruvian wild rubber, the factory had a production capacity of 36,500 tires annually as compared with the normal Peruvian consumption of 52,000 tires.

Proceeding with its plans for the industrialization of Peru, the Government early in the year signed a \$15,000,000 contract with a New York and London engineering firm for the construction of the steel mill and related works for the production of coal and iron ore decided upon in 1942 (see 1943 YEAR BOOK, p. 532). Construction was expected to be completed in two or three years. The Cabinet in June also approved a project for the creation of the Peruvian Santa Corporation, a

government holding company designed to further the industrialization of the Santa Valley. It contracted for additional port facilities at Chimbote in connection with the steel mill project.

United States Relations. The industrialization program was initiated with part of the \$25,000,000 credit advanced by the Export-Import Bank of Washington in 1942. There was an expansion of U.S.-Peruvian economic collaboration in other directions. Through the Defense Plant Corporation, the U.S. Government was spending \$4,000,000 to expand vanadium production in Peru. Under an agreement signed by the U.S. Defense Supplies Corporation and the Peruvian Government Feb. 18, 1943, the former agency undertook to finance construction of airport facilities, to supply airplanes, and to improve communication facilities in order to make possible the expansion of rubber production in the jungles of eastern Peru. This supplemented the rubber purchase agreement of 1942.

The opening of a Lima factory for the production of quinine tablets early in 1943 was one of the tangible results of the agreement of October, 1942, for the exclusive purchase of Peruvian quinine by the U.S. Government. The task of increasing the output of rubber, quinine, and other strategic materials in eastern Peru was pushed forward under the auspices of the Peruvian-Amazon Corporation, established in June, 1942, with both U.S. and Peruvian capital for the joint exploitation of that region. The Director General of Public Health reported in March that 15 hospitals were under construction in remote centers of the rubber-growing region in order to make it habitable for more rubber workers.

The Institute of Inter-American Affairs, another U.S. Government corporation, early in 1943 undertook to provide part of the funds and technical aid for a health and sanitation program in the Chimbote region on the west coast, where Peru's major industrial development was being planned. It was announced April 3 that the Peruvian Government had authorized the use of the docks at Callao by U.S. warships and transports. In mid-April Vice President Wallace made a three-day official visit to Peru. He was welcomed to Lima on April 12 by 200,000 people in what was described as the most spectacular demonstration ever accorded a foreign statesman.

Anti-Axis Measures. In his July 28 message to Congress President Prado stressed that Peruvian foreign policy was consistently directed toward fulfillment of the anti-Axis Rio de Janeiro accords; aid to the United Nations in prosecuting the war; the strengthening of inter-American solidarity; and co-operation in planning for the postwar world. After failing to secure the release of Peruvian diplomats interned in France, the Government broke off relations with the Vichy Government on January 26. On February 8 it adhered to the United Nations Declaration. The Finance Ministry announced May 26 that it had ordered the expropriation of all commercial organizations, real estate and other properties belonging to German and Japanese nationals whose assets were frozen under the Rio de Janeiro accords.

The Japanese-owned rubber factory in Lima was destroyed by fire March 17—the day it was to have been transferred to the state-controlled Banco Industrial. Notwithstanding this, Japanese aliens were given until January, 1944, to liquidate their business interests. Many of them arranged to transfer their properties to Japanese citizens of Peru. Meanwhile evidence that citizenship papers had been fraudulently issued to a number of wealthy

Japanese aliens led to the arrest of 15 governmental officials.

Accords with Chile. A five-day official visit to Peru by the Foreign Minister of Chile early in November strengthened the cordial relations between the two governments. The visit also resulted in the signing of a commercial agreement, details of which were to be worked out by a mixed commission, and a decision to connect the national air services of the two republics.

See *ARCHAEOLOGY*; *ECUADOR under History*; *LIBRARY PROGRESS*; *ROADS AND STREETS*; *SPANISH-AMERICAN LITERATURES*; *WORLD WAR*.

PETROLEUM. The production and use of petroleum in the United States are discussed, from the scientific and industrial angle, in the article on *CHEMISTRY under Petroleum* and, from the governmental angle, in *PETROLEUM ADMINISTRATION FOR WAR*. For a general picture, see *UNITED STATES under Production*. See also *AQUEDUCTS* (for pipelines); *ELECTRICAL INDUSTRIES*; *MINES, BUREAU OF*; *MOTOR VEHICLES*; *PRICE ADMINISTRATION, OFFICE OF* (for rationing); *RAILWAYS and SHIPPING* (for transportation); *RUBBER*; *STATE LEGISLATION under Taxation*; also, *ARABIA, IRAN, MEXICO, PARAGUAY, and VENEZUELA under History* and producing countries under *Production*.

PETROLEUM ADMINISTRATION FOR WAR (PAW). This Agency was created by an Executive Order issued by President Roosevelt on Dec. 2, 1942. It supplanted the Office of Petroleum Coordinator for War, which was established on May 28, 1941, immediately following the declaration that a national emergency existed, by a letter addressed to Secretary of the Interior Harold L. Ickes by the President. Secretary Ickes was appointed Petroleum Administrator for War, and he designated Ralph K. Davies as Deputy Petroleum Administrator. See 1943 YEAR BOOK for the authority and duties of the Administrator.

As of Jan. 1, 1944, the Petroleum Administration had approximately 849 employees in its Washington office, and approximately 542 more in its branch offices located in the cities of New York, Chicago, Houston, Denver, and Los Angeles. To assure full and continuing consultation with leaders of the petroleum industry, both executive and technical, and to provide a mechanism for effectuating approved plans of action, the Petroleum Administration has developed a comprehensive industry organization. This includes a Petroleum Industry War Council, which considers problems of national scope. The Council, headed by W. R. Boyd, Jr., is composed of 72 oil industry members from all parts of the country, representing both large and small producers of crude oil and natural gas, refiners, pipeline operators, and marketers, and also including representatives of trade associations, and cooperatives. In addition, in each of the five districts into which the country has been divided, district committees have been established to deal with sectional problems.

During 1943 the Petroleum Administration achieved two outstanding goals: (1) the virtual solution of the inland transportation problem caused by the withdrawal of ocean-going tankers for military service, and, (2) the achievement of more than four times the 100-octane aviation gasoline productive capacity that existed when the war began. By the end of 1944, the capacity is scheduled to be ten times what it was in January, 1942.

Through the mobilization of tank cars, pipelines, barges, and trucks into one vast overland oil-

transportation system—a cooperative undertaking of the oil and transportation companies, ODT (q.v.), and PAW—deliveries of oil to the Eastern Seaboard were increased from a negligible volume in 1941 to approximately 1,325,000 barrels a day, or a volume considerably in excess of the prewar tanker deliveries from domestic sources.

The movement of oil by pipelines was the biggest factor in solving the problem. In the early part of 1941, such movements into the Eastern States amounted to approximately 42,000 barrels a day. Today a network of through trunk lines carry crude oil and refined products from the producing areas of the Southwest and Midwest to the large consuming areas of the Eastern Seaboard at the rate of more than 500,000 barrels a day. This has been due largely to the capacity of the famed "Big Inch" extending 1,253 miles from Longview, Texas, to Phoenixville, Pa. This 24-inch pipeline was started in 1942 and completed in July, 1943, at a cost of \$95,000,000. It was financed by the government. Its rated capacity is 300,000 barrels of crude oil daily, but there have been days when it has done better than this. Two 20-inch lines, aggregating 111 miles, extend the "Big Inch" to New York and Philadelphia.

Additional relief of the transportation situation will be afforded by another segment of the pipeline system known as the "Little Big Inch." Started in the Spring of 1943 at an estimated cost of \$75,000,000 to the government, this 20-inch line will extend from the Houston-Beaumont area on the Gulf Coast to Linden, N.J. It will be in operation early in 1944. Its rated capacity will be 235,000 barrels of gasoline a day.

The year 1943 began to show the results of a vast program directed by the Petroleum Administration for the expansion of refining facilities to manufacture 100-octane aviation gasoline—the super combat fuel—involving an expenditure of more than \$900,000,000. Of this amount more than 75 per cent was the private investment of the petroleum industry, the balance being supplied by the government. Since Dec. 7, 1941, the Petroleum Administration and the oil industry have initiated 72 major 100-octane construction projects. Of these, 34 have been completed, and the remaining 38 will be finished shortly after the beginning of 1944. At the instance of the PAW, 200 minor projects were undertaken for changing or expanding existing facilities in order to increase 100-octane production. In 1944 an additional 22 domestic plants will be constructed.

In collaboration with the other agencies concerned the PAW carried out a program for conserving oil supplies and restricting unessential uses of petroleum products in areas of shortage.

The PAW played an important part in the petroleum industry's production activities. Some three and one-half trillion cubic feet of natural gas and an estimated 1,503,595,000 barrels of oil were produced during 1943. The PAW recommended production rates for the various oil producing States, promoted conservation practices designed to increase the ultimate oil recovery, encouraged exploration for new fields, and administered a program for the most efficient use of materials in drilling and other production operations.

To meet the special military demands the PAW continued to supervise the manufacture of petroleum components for synthetic rubber (see *RUBBER*), and directed operations of the refining industry, generally, so as to assure the production of adequate supplies of fuel and heating oils, lubricants, and other products required for military use,

for essential industry, and for the heating of homes.

The PAW serves as a Claimant Agency under the War Production Board's Controlled Materials Plan. Requests for materials used in the oil industry were handled by the PAW, and in all branches of the industry means of conserving critical materials were introduced. The elimination of unnecessary well drilling, the substitution of secondhand for new material or the use of less critical for more critical material, as well as improvement in designs and in methods of operation, all contributed to substantial savings in materials during the year.

The PAW collaborated with the appropriate Federal departments and agencies in the determination of plans and policies with respect to foreign petroleum activities. In conformity with such policies, the PAW directed the physical operations of foreign petroleum facilities of the American petroleum industry, and arranged for petroleum supplies for foreign shipment. See UNITED STATES under *Production*.

HAROLD L. ICKES.

PETROLEUM GASES. See *CHEMISTRY*.

PETROLEUM INDUSTRY WAR COUNCIL. See *PETROLEUM ADMINISTRATION FOR WAR*.

PHENOMENOLOGY. See *PHILOSOPHY*.

PHILANTHROPY. A trend toward combining the fund-raising campaigns of various related philanthropic enterprises has been apparent for some years, in the grouping of community charity drives, and in the combined organization of such relief and war agencies as United China Relief and the United Service Organizations. This trend was further accentuated at the beginning of 1943 by the formation of the National War Fund (q.v.) through which 17 war-related agencies undertook a joint nationwide campaign.

War relief overseas and welfare work among the armed forces in the United States continued to dominate charitable activity in 1943, as in 1942. This was a reflection not only of patriotic urge and of the universal appeal of war sufferers, but of domestic factors as well: the soaring national income has greatly reduced the numbers of needy individuals, and the expanding Federal-State programs in the field of welfare (see *SOCIAL SECURITY BOARD*) have to an extent obviated some of the more pressing needs in this field so that private funds may go elsewhere.

The statistics of the John Price Jones Corporation on gifts and bequests in the seven largest cities of the United States, showed a total of \$120,846,785 contributed in those cities in 1943, as compared with \$78,269,358 in 1942. Contributions for war and relief accounted for more than 87 per cent, \$36,521,930 going to American war organizations, \$71,976,602 to Community War Chests, and \$10,157,072 to foreign relief agencies, from these seven cities. The report of the war relief agencies registered with the War Relief Control Board (q.v. for statistics) showed that funds collected in 1943 more than doubled the sum for the previous year. See articles under *SOCIETIES* for individual reports. For individual gifts, see the subject, as *ART, LIBRARY PROGRESS, UNIVERSITIES, ETC.*

Foundation Activities. The following paragraphs contain reports on the activities of the wealthier and more publicly active foundations and trusts in the United States.

Automotive Safety Foundation is supported by annual contributions from more than 200 companies in the motor vehicle and parts manufacturing, rubber, petroleum, financing, and cement industries.

Organized in 1937 to carry on a broad, integrated highway safety program, the Foundation made grants in 1942 to 14 qualified national organizations for specific activities in the fields of safety, transportation, conservation, and postwar highway planning. Chairman: Paul G. Hoffman. President: Pyke Johnson. Vice Presidents: Norman Damon and G. Donald Kennedy. Headquarters: the Tower Building, Washington, D.C.

Bamberger Foundation. See *ADVANCED STUDY, INSTITUTE FOR*.

Bok Foundation, The Mary Louise Curtis, has as its principal activity the support of the Curtis Institute of Music in Philadelphia. Grants have also been made to the Settlement Music School, Philadelphia, and the Research Studio, Maitland, Fla., the latter being a kind of "laboratory" for painting. Financed by gifts of \$12,500,000 from Mrs. Mary Louise Curtis Bok, the Foundation was created in 1931 for the support of music, fine arts, science, invention, or general education. Address: 1726 Locust Street, Philadelphia, Pa.

Buhl Foundation, established in 1928 by Henry Buhl, Jr., reported that its capital assets were \$13,011,660 in 1943 and that expenditures for the year totaled \$523,840. The Foundation's programs center in the Pittsburgh area, where it has sought to provide more adequate factual bases for social work and regional economic effort, to promote research in public health and the natural sciences, and to develop the community's resources in higher education. Another objective is the advancement of housing standards for American cities, as exemplified in large-scale planned communities administered on a long-term investment basis. In demonstration of this last-named objective, the Foundation operates Chatham Village in Pittsburgh, built in 1932 at a cost of \$1,700,000. The Buhl Planetarium and Institute of Popular Science was built at a cost of \$1,100,000 in 1939 as a gift to the people of Western Pennsylvania. Director: Charles F. Lewis. Offices: the Farmers Bank Building, Pittsburgh, Pa.

Carnegie Endowments. See separate article.

Children's Fund of Michigan reported expenditures of \$735,773.67 during the fiscal year ending Apr. 30, 1941; capital assets on that date were \$7,693,279.09. The Fund was established by James Couzens with a gift of \$10,000,000 in 1929 to promote the health, welfare, happiness, and development of children in Michigan, primarily, and elsewhere in the world. Chief officer: Wm. J. Norton, 660 Frederick Street, Detroit, Mich.

Commonwealth Fund. See separate article.

Cranbrook Foundation of Bloomfield Hills, Mich., was established in 1927 for the purpose of adding to and strengthening educational and cultural facilities within the State of Michigan. It is developing a cultural center at Bloomfield Hills including three schools, an Academy of Art, an Institute of Science, and a church. Expenditures for the year ended June 30, 1943, were \$112,015; capital assets on that date, \$5,443,953. Chairman of the Board of Trustees: George G. Booth.

Duke Endowment. See 1942 *YEAR BOOK*, p. 508.

Falk Foundation, The Maurice and Laura, makes grants to economic research organizations for definitive studies of specific economic problems basic to the development of American industry, trade, and finance. Grants voted in 1943 totaled \$152,166 and included \$75,000 to The Brookings Institution, Washington, D.C., for sequential studies to research investigations previously made under the Foundation's appropriations, and out-of-program grants to such wartime organizations as the

United War Fund and the American Red Cross. Payments in 1943 on grants voted in 1943 and earlier years totaled \$177,166. Capital assets had a market value of \$4,168,746 on Dec. 8, 1943. The Foundation was established by Maurice Falk in 1929 with the provision that principal as well as income be used within 35 years for advancement of the general public welfare. Executive Director: J. Steele Gow. Chairman of the Board of Managers: Leon Falk, Jr. Offices: Farmers Bank Building, Pittsburgh, Pa.

Field Foundation, Marshall. See OPINION RESEARCH CENTER.

General Education Board. See article on GENERAL EDUCATION BOARD.

Guggenheim Memorial Foundation, The John Simon, was created in 1925 by Simon Guggenheim and his wife as a memorial to a son who died at the age of 18. The original endowment was \$3,000,000 enlarged to \$7,000,000 by 1939, and further increased upon the death of Simon Guggenheim in 1941. In fulfilling its purpose to "promote the advancement and diffusion of knowledge and the appreciation of beauty" the Foundation awards Fellowships, normally \$2,500 a year, to citizens of the United States, Canada, and certain Latin American countries. Since its establishment the Foundation has granted 1,302 Fellowships with stipends totaling \$2,689,335. In the year 1943 the Foundation granted 78 Fellowships with stipends totaling \$167,000.

Hayden Foundation, Charles, founded in 1937 with an endowment of \$50,000,000, assists needy boys and young men, especially through aid to recreational centers. Offices: 25 Broad Street, New York City.

Heckscher Foundation for Children, The, an organization founded by August Heckscher (1848-1941) to promote the welfare of children. The Foundation was incorporated Mar. 15, 1921, and occupies its own building at 1 East 104th St., New York City. It maintains benevolent, educational, recreational, and welfare activities. The several departments include a kindergarten, day nursery, toymery, arts and crafts, sewing, boys' and girls' game rooms, billiard room, boys' workshop, library, gymnasium and swimming pool, print shop, thrift shop, and facilities for tap dancing and piano lessons. The Foundation also includes the Heckscher Theater which has a seating capacity of 667.

James Foundation of New York, Inc., was incorporated Aug. 23, 1941, under the Membership Corporation Law of the State of New York, pursuant to the provisions of the will of the late Arthur Curtiss James who died on June 4, 1941. The Foundation will receive, upon the conclusion of the executorial administration of the estate of Arthur Curtiss James, the residuary estate, the amount of which is not yet determined. The income of the funds received, and ultimately the principal of the funds, will be distributed through organized religious, educational, and other charitable corporations. The officers are William W. Carman, President, and Talbot T. Lewis, Secretary and Treasurer. Trustees: William W. Carman, Robert E. Coulson, Williamson Pell, Talbot T. Lewis, and Wm. B. Warner. Offices: 40 Wall Street, New York City.

Juilliard Musical Foundation was incorporated in New York State in 1920, in accordance with the will of Augustus D. Juilliard, to aid worthy students of music, promote the instruction of the general public in the musical arts, and to encourage a deeper interest in music in the United States. Invested trust funds had a book value of about \$12,000,000 in 1942, only the income is distributed.

Secretary: M. Steilen, 31 Nassau Street, New York City, 5.

Kellogg Foundation, established by W. K. Kellogg in 1930 to advance the well-being of children without regard to race, creed, or geographical boundary, expended \$1,770,335 during the year ending Aug. 31, 1943. Total capital assets on that date were \$43,934,332. The Foundation has undertaken and is administering the Michigan Community Health Project, a health program involving seven counties in southwestern Michigan. The present program includes also national and international health promotion activities and the granting of fellowships. President and General Director: Emory W. Morris. Headquarters: Battle Creek, Mich. See DENTISTRY.

Macy Foundation, established in 1930 by Mrs. Kate Macy Ladd in honor of her father, Josiah Macy, Jr., reported total expenditures for the year ending Dec. 31, 1943, at \$326,250; total grants paid \$262,158. Drafts are not permitted upon the endowment, which has a ledger value of \$6,600,214. Emphasis is placed on special problems in medicine which require for their solution studies and efforts in correlated fields as well, such as biology and the social sciences. In the present emergency the Foundation is giving special attention to health problems within its program which make a contribution to the war effort wherever possible in collaboration with the armed forces. As a special wartime service the Foundation is distributing to medical officers of the armed forces of the United States, and of the United Nations as well insofar as possible, reprints of selected current medical literature. President: Dr. Willard C. Rappleye. Medical Director and Executive Secretary: Dr. Frank Fremont-Smith. Headquarters: 565 Park Avenue, New York 21, N.Y.

Markle Foundation, John and Mary R., established in 1927 by John Markle, limits its major activities to grants to institutions in support of special projects in medical research. Appropriations made in 1942 amounted to \$543,791, while grants paid and operating expenditures were \$563,850. There were in progress during the year 169 separate projects receiving aid. The year-end market value of the principal account was \$15,821,046. President: Thomas W. Lamont; Vice President and Treasurer: Archie S. Woods; Secretary, Florence E. Quick; Assistant Secretary and Assistant Treasurer, Irene R. Power. Offices: 14 Wall Street, New York 5, N.Y.

Mellon Trust. See ART under Gifts.

Milbank Memorial Fund, established in 1905, reported assets of \$9,095,029 at the end of 1942. Appropriations for grants and projects in that year totaled \$353,854. The Fund assists agencies and institutions in the field of public health and medicine, education, social welfare, and research. Emphasis is given to activities which are preventive rather than palliative, and to the improvement of administrative procedures in public health. In 1942, 22 organizations received funds, including Community Service Society of New York, \$20,000, Judson Health Center, \$25,000, Neighborhood Health Development, Inc., \$8,000, and Princeton University (for study of population problems) \$11,625. President: Albert G. Milbank. Executive Director: Frank G. Boudreau; M.D. Offices: 40 Wall Street, New York City.

Permanent Charity Fund was established in 1915 by the Boston Safe Deposit and Trust Company to furnish a medium through which money may be left in trust to charity. The principal of the Fund is invested and the income distributed to existing

organizations, usually of Boston and vicinity. Payments to charities during the fiscal year ended June 30, 1943, totaled \$241,098 and capital assets on that date were \$5,690,565. President: Charles E. Mason. Secretary: Charles M. Rogerson. Offices: 100 Franklin Street, Boston, Mass.

Pilgrim Trust. See ART under Art Education.

Reynolds Foundation, Inc., established in 1936 for charitable and civic purposes within the State of North Carolina by the brother and sisters of Zachary Smith Reynolds, deceased, has since its inception used its income primarily for a campaign to control venereal disease in the State. Annual grants have been made as follows to the State Health Department for this purpose. The contribution for 1943 was \$200,000. The book value of the principal of the Trust, as of Oct. 1, 1943, was \$10,112,117, which represented its approximate value. Trustees: Richard J. Reynolds, President, W. N. Reynolds, Mary Reynolds Babcock, Nancy Reynolds Bagley, W. R. Hubner. Secretary: Stratton Coyner, Winston-Salem, N.C.

Rockefeller Foundation. See separate article.

Rosenwald Fund, The Julius, during the 25 years since its establishment in 1917 by Julius Rosenwald, has expended approximately \$18,000,000, being all of its income from year to year and about seven-eighths of its principal fund. The Trustees are required to expend all funds within 25 years of the death of the founder, that is, before Jan. 6, 1957. At the close of the fiscal year June 30, 1943, the assets of the Fund had a value of approximately \$3,000,000. The chief program of the Fund during its early years was aid in the building of rural public schools for Negroes. The main programs in 1943 were: (1) improving the content and quality of rural education in both white and Negro schools in the south; (2) fellowships for Negroes and for white southerners; and (3) efforts to improve race relations, especially the relations between white and colored citizens throughout the United States. During the year 1942-43 the Fund expended \$475,000 upon these and related programs.

Russell Sage Foundation, created in 1907 through a gift of \$10,000,000 by Mrs. Russell Sage, as a memorial to her husband; \$5,000,000 additional was left to the Foundation in Mrs. Sage's will. Its principal purpose is to study and analyze the causes of adverse social and living conditions in the United States, and to make available to citizens, organized groups, and others, such information, advice, and proved methods as will assist them to relieve, remedy, improve, or prevent similar untoward conditions affecting the welfare of their communities. Among the types of activities which in recent years have been carried on by its own Departments, or through its grants to agencies with similar purposes are: adult education, city and regional planning, family welfare, training for social work, study and coordination of community social work programs, child welfare, vocational service and placement, leisure-time activities, legal aid, social welfare publications, improvement of race relations, research in the social sciences, methods of relief, improvement of conditions affecting small loans, control of consumer credit, work relations in industry, increasing the public understanding of social work, social statistics, and the relation of the arts to social work. Printed reports of its principal studies are issued by the Foundation, and to assure their greater distribution to interested persons are made available at cost. Among its recent publications are *The WPA and Federal Relief Policy*, by Howard; *A Study*

in Public Relations, by Levy; *Salaries and Qualifications of Child Welfare Workers in 1941*, by Hurlin; a series of occasional papers on *Administration of Relief Abroad*, edited by Howard, including a bibliography on *Foreign Relief and Rehabilitation*, compiled by Holt; a Library bibliography on *War and Social Problems*, compiled by Baer; and the *Social Work Year Book 1943*, edited by Kurtz. The offices of the Foundation are at 130 East 22 Street, New York 10, N.Y. Shelby M. Harrison is General Director.

Sloan Foundation, The Alfred P., incorporated in 1936, aids accredited schools and colleges in developing new "patterns" in economic education. On Dec. 31, 1943, its capital assets were valued at \$5,849,589. Up to the same date, the Foundation had made grants amounting to \$2,031,564. At present the Foundation is enabling colleges and universities to promote popular economic education through radio, recordings, motion pictures, books and pamphlets, fellowships, and class instruction. Among such projects aided by the Foundation are: the *University of Chicago Round Table of the Air*, a weekly radio discussion of economic phases of national and international questions; the New York University Film Library, which distributes sound motion pictures and recordings on economic subjects; and the Public Affairs pamphlets, containing popular digests of current economic researches, issued continuously by the Public Affairs Committee of New York.

In addition to aiding these three forms of education for the thinking citizen, the Foundation in 1943 lent its support to a continuing Institute on Postwar Reconstruction at New York University. Here economists and national leaders in business, politics, labor, and agriculture discuss with a diversified audience plans for achieving widespread employment and a higher standard of living in America after the war.

To coordinate these varied educational efforts and to help schools and discussion groups make intelligent use of motion pictures, broadcasts, recordings, and pamphlets, these four institutions in 1943 set up a joint office in New York City with Foundation aid. Called "New Tools for Learning," the joint organization issues lists of available films, recordings, and pamphlets on various topics and offers a consultation service.

In the field of applied economics, the Foundation aids the State universities of Kentucky, Florida, and Vermont in carrying on experiments designed to help low-income groups. The experiments aim to discover whether solely through instructing school children in simple, inexpensive ways of improving diet, housing, and clothing, the community level of living can be raised. To enable teacher-training institutions throughout the country to study these experimental centers at first-hand, special grants were made to the American Association of Teachers Colleges for traveling fellowships.

To help the harassed tax payer find out how the city fathers are spending his money the Foundation maintained through 1943 ten fellowships at the University of Denver to train college graduates as expert appraisers of city, county, and town finances. The 18-month course equipped the fellow-holders to qualify as advisers to citizen groups. The Foundation also made a grant to the Brookings Institution. Director: Harold S. Sloan. Offices: 30 Rockefeller Plaza, New York City.

Spelman Fund of New York was incorporated in 1928 with a principal fund of \$10,000,000. The Trustees of the Fund have power to use the principal as well as income to carry out its purposes.

During 1943, the Fund continued its program directed at the improvement of methods and techniques in the field of public administration. Support was extended to public and quasi-public agencies engaged in disseminating information regarding advances in administrative practice, in developing new types of organization and operating methods, and in actually installing administrative improvements in governmental agencies. The Chairman of the Board of Trustees is Charles E. Merriam. The offices of the Fund are located at 49 West 49 Street, New York City.

Twentieth Century Fund is an institute for research in economic questions. The Fund is privately endowed and its entire income, administered as a public trust by a Board of Trustees, is devoted to its own research and related activities. For each major investigation the Fund appoints a special research staff and an impartial committee of qualified persons who use the factual report of the staff as a basis for recommendations on public policy. In order to make its findings available to as wide a public as possible, the Fund issues its surveys in book form and supplements these with news releases, pamphlets, bulletins, study outlines, magazine articles, and other materials, and produces occasional series of radio programs. Active contact work is maintained with organizations and educational institutions. The Fund is now concentrating on problems of postwar reconstruction. Current activities include a series of exploratory reports by Stuart Chase; a compilation of governmental and private agencies engaged in postwar planning; preparation of a discussion manual on wartime facts and postwar problems; and a large-scale research project by the Fund itself. Other recent major surveys concern collective bargaining, housing, the distribution system, taxation, and government's relation to the electric power industry. See **POSTWAR PLANNING**.

Warm Springs Foundation, a membership corporation, conducts a modern and scientifically equipped institution at Warm Springs, Ga., with a capacity of 100 beds, for the study and treatment of the after-effects of poliomyelitis (infantile paralysis). The Foundation is the only institution devoting its energies entirely to the after-effects of infantile paralysis. It seeks to improve and perfect methods of treatment and make the knowledge gained thereby available to the medical profession and the public. President: Franklin D. Roosevelt. Chairman of the Executive Committee: Basil O'Connor. Address: 120 Broadway, New York City.

PHILIPPINES. A group of islands in the Western Pacific Ocean, ceded to the United States by Spain on Apr. 11, 1899, and conquered by Japanese armed forces in 1942. The Tydings-McDuffie Act of Mar. 24, 1934, made the Philippines an autonomous commonwealth, designed to become fully independent in 1946. Capital, Manila.

Area and Population. The combined area is 114,400 square miles. This comprises 7,083 islands, of which only 466 cover as much as one square mile apiece. Two islands, Luzon (40,814 sq. miles) and Mindanao (36,906 sq. miles) account for more than two-thirds of the whole area. Others, with their respective areas in square miles, are Samar, 5,124; Negros, 4,903; Palawan, 4,500; Panay, 4,448; Mindoro, 3,794; Leyte, 2,799; Cebu, 1,695; Bohol, 1,534; Masbate, 1,255.

The population was estimated at 16,771,900 on Jan. 1, 1941; at the census of 1918, 10,304,310. The city of Manila had (1939) 623,362 inhabitants. Persons from the United States, other than members of its armed forces and their families,

numbered 4,144 in 1939. There were 117,461 Chinese. Japanese numbered 29,262, of whom 17,888 were in and about Davao, on Mindanao Island. The Commonwealth in 1937 enacted legislation making Tagalog, the most prevalent native tongue, one of the official languages effective in 1946. About one in eight of the population was estimated to have some knowledge of the English language; about one in 16, of Spanish. The Roman Catholic Church holds the greater number of the people of religious affiliation. An independent Filipino Church (Christian) has many worshippers. Mohammedans number not far from half a million. Protestants are estimated at 250,000.

Education. The literacy rate was 48.8 per cent at the 1939 census (20.2 per cent in 1903). All schools began teaching Tagalog, in addition to English, in June, 1940. In April, 1942, the Japanese invaders ordered that instruction be in Japanese and Tagalog instead of English and Tagalog. In March, 1940, the public school system included 12,057 schools, 43,763 teachers and administrators, and 1,940,729 pupils, the largest enrollment in the islands' history. There were in addition 439 private schools, colleges, and universities, with 149,491 students. More than one-third of the 1941 budget was allotted for the support of public education.

Production. Agriculture is the main support of the population, but mining and manufacturing were expanding rapidly at the time of the Japanese occupation. Yields of the chief crops in 1940-41 were (in metric tons): Rice, 2,090,200; cane sugar, 937,000; tobacco, 34,400; corn, 409,500 in 1939-40; copra (net exports), 570,500 in 1940; Manila hemp, 193,000 in 1939-40. Estimated value of all crops in 1939-40 was 381,067,000 pesos (rice, 159,741,000; sugar, 97,524,000; coconuts, 52,439,000; Manila hemp, 15,053,000; corn, 18,986,000). Livestock in 1939 included 2,607,836 water buffaloes, 1,721,600 cattle, 504,967 horses and mules, and 3,558,274 swine.

Gold production in 1940 was estimated at 1,095,939 fine oz.; silver, 1,395,731 fine oz. Output of other minerals in 1940 was (in long tons): Copper ore, 20,413,236; iron ore, 1,215,718; lead, 1,422,471; chromite, 189,919; manganese ore, 57,256. The value of gold, silver, and platinum produced in 1940 was 78,375,384 pesos (preliminary), of which gold accounted for 76,499,481 pesos. Base metal output was valued at 12,994,222 pesos. Leading factory products are refined sugar, lumber, soap, refined coconut oil, shoes, textiles, and tobacco products.

Overseas Trade. The overseas trade of the Philippines for the calendar years 1939 and 1940 and the average for the five years 1934-38 are shown in the table on page 480 in pesos (1 peso equaled 50 cents, U.S. money).

United States statistics for the nine months ended with September, 1941 (the latest figures available) showed U.S. merchandise exports and reexports to the Philippines of \$81,489,808 and merchandise imports from the Philippines of \$72,925,140 (exclusive of \$32,202,823 in gold and \$716,473 in silver).

The value of the chief 1940 exports was (in 1,000 pesos): Sugar and its products, 94,794 (raw sugar, 86,170); gold, 75,800; abaca (manila hemp), 25,396; coconut oil, 19,724; copra, 18,803; tobacco and its manufactures, 10,291; embroideries, 9,162. Imports in 1940 were divided by main groups as follows (in 1,000 pesos): Metals and their manufactures, 71,845; nonmetallic minerals and chemicals and manufactures thereof, 56,-

718; textiles and manufactures, 52,834; foodstuffs, 42,609; unclassified, 45,682.

PHILIPPINE OVERSEAS TRADE
(In millions of pesos)

	1934-38 average	1939	1940
Exports ^a			
To the United States and possessions:			
General.....	195	187	179
Gold and silver.....	39	73	79
Total.....	234	260	258
To other countries ^b	48	56	54
To all countries.....	282	316	312
Imports			
From the United States and possessions.....	131	167	211
From other countries.....	74	78	59
From all countries.....	205	245	270
Total trade			
With the United States and possessions.....	365	427	469
With other countries.....	122	134	113
With all countries.....	487	561	582
Percentage of Trade with United States and possessions			
Exports.....	83	82	83
Imports.....	64	68	78
Total trade.....	75	76	80

^a Includes reexports. ^b Includes gold and silver to Japan: 1939, approximately ₱440,000; 1940, approximately ₱800,000. Source: Reports of the Insular Collector of Customs.

Finance. Actual total budgetary returns for the fiscal year ended June 30, 1940, were: Receipts, 158,029,870 pesos; expenditures, 183,616,273 pesos. Actual general fund receipts for the six months ended Dec. 31, 1940, totaled 41,379,521 pesos; disbursements, 37,981,594 pesos. General fund estimates for the year ended June 30, 1942, were: Receipts, 82,310,000 pesos; disbursements, 112,675,480. The net outstanding bonded debt on Dec. 31, 1940, was 72,746,559 pesos.

Practically all of the funds of the Commonwealth Government were saved from the Japanese invaders. Most of the Treasury certificates (paper money) was taken to Corregidor and burned before its capture. The gold reserve was taken out of besieged Corregidor by an American submarine and sent to the United States, where most of the Government's securities and other funds were on deposit either in the U.S. Treasury or in depository banks at the outbreak of war with Japan. According to a statement issued by the Auditor-General of the Philippines on Apr. 3, 1943, the Government-in-Exile was meeting all of its expenses and obligations by using only part of the interest on the funds on deposit in the United States.

Transportation. The island of Luzon in 1941 had about 700 miles of railway, the greater part of all the rails in the Philippines. Lines on the islands of Panay and Cebu aggregated 133 miles. Producers of sugar and of lumber had an aggregate of thousands of miles of private rails. Highways extended 13,746 miles. A total of 1,060 ships (234 of American registry) aggregating 3,736,984 tons sailed from Philippine ports in 1940.

Government. Under the Tydings-McDuffie Act of 1934, a Philippine constitutional convention drew up a constitution which was approved by popular vote and went into effect Nov. 15, 1935. It vested wide executive powers in a President elected by popular suffrage for six years and legislative authority in a single-chambered National Assembly of 96 members elected for three years. Constitu-

tional amendments adopted in 1940 reduced the Presidential term to four years; revoked the former clause barring reelection of a President (two successive terms only were permitted); established a bicameral Congress, with Senators elected at large, in place of the National Assembly; and established an independent electoral commission to supervise elections. Pending the full independence of the Philippines in 1946, the U.S. Government retained control over the Commonwealth's defense and foreign relations. Constitutional changes and legislation affecting currency, coinage, foreign trade, and immigration required the approval of the U.S. President. A High Commissioner represented the U.S. Government at Manila.

President in 1943, Manuel Luis Quezon, who assumed office Nov. 15, 1935, and was reelected for a four-year term on Nov. 11, 1941. Escaping from the Philippines with his War Cabinet early in 1942, President Quezon established the Government-in-Exile in Washington on May 14. At the end of January, 1942, the Japanese were reported to have established a puppet Filipino government in Manila, headed by Jorge Vargas. Vargas, who was secretary to President Quezon and a member of the Commonwealth Cabinet, had been left behind in Manila to head a governing commission during the Japanese occupation.

HISTORY

Fall of the Philippines. Although the Japanese began their invasion of the Philippines on Dec. 8, 1941, it was more than a year before the islands were completely under control. Gen. Douglas MacArthur, under orders from President Roosevelt, left Corregidor on Mar. 11, 1942, and arrived in Australia on March 17. Lieut. Gen. Jonathan M. Wainwright, left in command, held out until May 7. Remnants of American and Filipino troops operating in Mindanao and northern Luzon, continued active guerrilla opposition well into 1943. Premier Tojo visited the Philippines late in the spring of 1943, and returning to Japan, announced that the Japanese Army was still carrying on "military operations" and working for the establishment of "peace and order." The Tokyo radio announced in June that Luzon had been "completely pacified," but late in July it admitted activity against American snipers in the Luzon jungles and bitter fighting between American and the occupying forces in Mindanao. President Quezon, head of the Philippine Government-in-Exile in Washington, broadcast in November a plea to his people to keep up their guerrilla warfare against the invading Japanese.

Under Japanese Rule. The puppet government, set up in 1942, with Jorge Vargas as "Chief of State" was replaced in the fall of 1943. A new Filipino Constitution was ratified during September. There is no conscription clause. It contains a Bill of Rights resembling that of the United States, but has a reservation that these rights may be nullified if peace and order are threatened. On September 25, the Tokyo radio announced that José P. Laurel, Interior Commissioner of the puppet Philippines Government, had been named as "President-elect of the future Republic of the Philippines" at the first session of the "National Assembly." Benigno Aquino, head of the *Kalibapi*, the new totalitarian political party designed by the Japanese, was made speaker of the "National Assembly." Three months earlier, Commissioner Laurel had narrowly escaped assassination while playing on a Manila golf course.

Japan had been promising the Filipinos "inde-

pendence" since early in 1943. In the fall she announced that this "independence" would be withheld until the guerrilla bands surrendered. However, on October 14, the Philippines became an "independent" nation within the Japanese "co-prosperity sphere." Tagalog became an official language of the State, replacing English. The new State flag had a sun in the center, surrounded by three stars representing the two main islands and the Vizayan group, which contains all the remaining islands. The president-elect, José Laurel, after returning from conferences in Tokyo with Japanese officials, met with the Philippine "National Assembly" and requested authority to decree administrative and budgetary laws. The new Philippine "Republic" was recognized immediately by Berlin, Thailand, Manchukuo, and the puppet government in Nanking.

On October 15, President Quezon broadcast to the Philippines that Japan's purpose in granting independence was to use the islands in its prosecution of the war against the United States. On October 22, President Roosevelt declared that the United States would not recognize nor sympathize with the puppet government. This statement was in line with the Pacific policy determined two months before at the Quebec Conference by Prime Minister Winston Churchill and President Roosevelt.

Military administration of the islands during 1943 was marked by several changes. Lieut. Gen. Masaharu Homma was relieved of his command there in August, 1942. Apparently he was not replaced until May, 1943, when Lieut. Gen. Shizuichi Tanaka became Japanese commander-in-chief in the Philippines. However, in less than a month he was transferred and replaced by Lieut. Gen. Shigenori Kuroda. These military administrations were marked by the transfer of some American and Filipino soldiers taken prisoners after the fall of Bataan and Corregidor to Formosa, Japan, and Manchuria, where, it was reported many were doing forced labor. Most of the higher-ranking officers were taken to Japan. Other American prisoners were taken to camps at Cabanatuan, Davao, and Mindanao. Civilians were interned at Santo Tomas University near Manila. In June, 1942, the Japanese ousted the Red Cross from all prison camps and made per-capita allotments, which were increased to fifty cents in September, 1943. The hospitals at Santo Tomas were operated by interned doctors and U.S. Army nurses from Bataan and Corregidor.

Japanese rule during 1943 also saw sporadic outbreaks of anti-Japanese sentiment. A wave of assassinations and attempts on the lives of Filipinos and Chinese known to be collaborating with the conquerors was followed by executions on the part of the Japanese.

Japan's early plans were for economic self-sufficiency in the Philippines. One of the first steps in 1943 was the imposition of a sales tax ranging from 20 to 35 per cent on the people of the Japanese-occupied Philippines. A "five-year plan" was inaugurated to increase food production for their military machine. It was claimed by the Japanese that one-third of all the cultivated land in the Islands was now planted in essential food crops: rice, potatoes, beans, corn, and other staples. Cotton lands had been increased and plans were made to plant these lands between seasons to rice, corn, soybeans, and sweet potatoes. Wheat was even tried in the face of adverse climatic conditions. The island of Mindanao harvested a record coffee crop, and the making of domestic grape wine was

encouraged. The sugar industry was to be reorganized according to a plan of "rationalization." Of the 70 refineries less than half were to remain in business. The others were to be utilized for producing alcohol and butanol or for other purposes.

Accounts by interned American reporters returned home on the *Gripsholm* painted the reverse of the Japanese picture of self-sufficiency. They reported the Japanese Army living off the country, the natives unable to obtain fish, the price of rice and other staples increased as much as 500 times, and a serious sugar shortage, due probably to the Japanese depletion of sugar reserves for making glycerine and alcohol. One of the returned correspondents told of Japanese efforts to persuade the Filipinos into their way of thinking. Japanese-language schools had been opened throughout the Philippines, and many young Filipinos from the best families were being sent to Japan for indoctrination to prepare them for future leadership.

American Proposals. Counter measures to offset Japanese gains and promises in the Islands were taken by the United States in 1943. On August 12 President Roosevelt broadcast a message to the Filipinos on the 45th anniversary of the American occupation of the Philippines. He assured them that they would be represented at the peace conference after Japan's defeat. He referred to the Philippines as a signatory of the declaration by the United Nations, and mentioned President Quezon's and Vice-President Osmena's attendance at meetings of the Pacific War Council, where the war in the Pacific is planned. He also promised that the "entire resources in men and materials of the United States" will be used to free the Commonwealth, and assured them assistance in repairing the Islands after the war.

Again on October 6, the President asked Congress to give him authority to proclaim the independence of the Philippines as soon as possible, instead of in 1946 as the independence law provided. Such legislation was introduced in the Senate by Senator Tydings, and an identical bill was introduced in the House by Representative Bell. The bill provided full independence "as soon as feasible"—that is, as soon as the Japanese were expelled. The bill had the approval of the Philippine Government-in-Exile, President Roosevelt, and Cordell Hull, Secretary of State. Under the Philippine Constitution, established in 1935, President Quezon would have been retired on Nov. 15, 1943, to be replaced by Vice-President Osmena. Special legislation passed by the U.S. Congress continued both Quezon and Osmena in their offices for the duration of the war. In September, 1942, the functions of the office of the High Commissioner to the Philippines were transferred by executive order to the Secretary of the Interior. The High Commissioner's duties include attention to problems concerning Americans interned in the Philippines.

Secretary Hull's statement on the occasion of the eighth anniversary of the establishment of the Philippine Commonwealth reaffirms the pledge of American support to the Filipinos:

As the Filipino people recall what the Japanese enemy has done and is doing to the natives of Formosa, of Korea, of China, of Thailand and of Burma, and of all the areas overrun and invaded by the Japanese, it will be apparent to them, and to all of us, that Japan will never voluntarily withdraw from the Philippines, but rather will put forth its utmost effort to remain there for the purpose of exploiting those areas and those people in the sole interest of the Japanese Government.

They will not remain. They will be driven out.

During the last half of 1943 the fortunes of war turned against the Axis powers. Plans were

started for the postwar era, and United States officials were taking steps to repair the ravages of war. The Secretary of the Interior reported on December 25 that the economic and financial rehabilitation of the Philippines was being planned. Such preparation was needed, he said, to repair government property, the damaged banks and credit houses, and the schools and health services. President Quezon also assured his people that General MacArthur would soon be able to start reconquest of the Philippines and that both of them would return to Manila together. See WORLD WAR. CHARLES F. REDD.

PHILOSOPHY. Although the American Philosophical Association did not meet in 1943, the standard philosophical journals appeared, in spite of the war, and a number of noteworthy books were published.

The most important book of the year was *The Philosophy of Bertrand Russell*, the fifth volume of *The Library of Living Philosophers*, edited by Paul A. Schilpp. It contains 21 essays on various aspects of Russell's thought, Russell's "Reply to Criticism," his autobiographical sketch, "My Mental Development," and a complete bibliography of his writings.

Hans Reichenbach opens the volume with a clear, popular account of Russell's contributions to logic, most of which are to be found in *Principia Mathematica* (1910). He explains how the *propositional function* coordinated class and relation, the latter becoming a variant of the former, describes *material implication*, the much disputed definitions of cardinal numbers, the simple and ramified theories of types and other important innovations. He shows that much of this work stands today, and that where improvements have been made in the past thirty years, they have often been inspired by Russell himself. The boldest and most far-reaching thesis of *Principia Mathematica* was that mathematics is a branch of logic, that positive integers can be defined purely in terms of logical notions, and that there is a perfect correspondence between the logically derived results and those of ordinary mathematics. Reichenbach not only describes and defends Russell's contributions, he also asks several probing questions. Why insist upon a two-fold classification of propositions? Is not a three-fold division often more useful? "To speak of 'Truth in itself' and 'Falseness in itself,' existing as Platonic ideas . . . has no relation to actual procedures of knowledge." He proposes, with Brouwer, to abandon the principle of excluded middle, but does not favor the division of propositions into true, false, and indeterminate, for he prefers to replace the true by the "verifiable."

Morris Weitz's "Analysis and Unity of Russell's Philosophy" is systematic, and well documented. Russell takes only a few exceptions. He offers the valuable explanation that in his recent *Inquiry into Meaning and Truth*, he does not reject the dualism of universals and particulars, but only places qualities among universals. His aim is to get rid of "substance." James Feibleman's paper is also concerned with the question of universals, and undertakes to defend the early realistic Russell of *The Problems of Philosophy* against the nominalistic Russell of the second edition of *The Principles of Mathematics*. Russell replies that the use of the word "similar" is important and unavoidable, and may imply realism. Cognate with the question of universals, is the theory of "descriptions." Although this theory was presented with much logical pre-

cision, G. E. Moore in his paper succeeds in pointing out a number of ambiguities in its formulation. Whereas Moore is concerned with a particular linguistic theory, Max Black undertakes to criticize Russell's whole theory of language. He argues that the theory of types implies "that the impossibility of substituting two words for one another in even a single context [is] to be regarded as a sufficient cause for their segregation into mutually exclusive types . . . So stringent does the requirement prove that it becomes difficult, if not impossible, to state the theory itself without contradiction." The result, he believes, is a kind of paralysis of philosophical thought.

Albert Einstein, commenting on Russell's theory of knowledge, regrets that the influence of Hume has led to a pervasive fear of metaphysics, as illustrated by the common replacement of objects by "bundles of qualities." He urges that this bad conscience be exorcized and the need for metaphysics recognized. Other writers also believe Russell's attempt to escape from metaphysics is impossible or unwise. John Laird argues that the use of the word "I" seems to imply a substantial self and mental acts, neither of which can be reduced to sense-data. Walter T. Stace objects to Russell's project (in *The Analysis of Mind*) of constructing the world out of verifiabiles only. John Eloff Boodin, on the other hand, complains of too much false metaphysics, and denounces Russell's positivism, atomism, and "solipsism." Common sense, he claims, is a more reliable guide than the "fairy land speculations" of Leibniz and Russell. These and many other objections result from Russell's persistent use of the principle of "Occam's razor," which counsels us to substitute, "whenever possible, constructions out of known entities for inferences to unknown entities." This point is discussed by Ernest Nagel and others.

The last seven papers are concerned with Russell's ethical, religious, political, economic, and historical theories. Russell's view that a judgment of value is merely an expression of desire (so that when I say "Democracy is good" this means only "Would that all men desired democracy") is challenged by Justus Buchler. He argues that this subjectivism is apparently inconsistent with the facts of moral life, such as conflict and persuasion, and with Russell's own warm approval or disapproval of other people's attitudes and actions. In reply Russell insists upon his right to express his ethical passions, even though what he says is neither true nor false of anything save his own private feelings. Edgar Sheffield Brightman also complains of Russell's subjectivism, and contends that it blinds him to the "empirical evidence and possibilities of positive aspects of religion." Russell, he says, insists on the alternative: either perfect demonstration of religion or rejection. He maintains, however, that Russell is truly religious, and believes in God, since he evinces a need for something beyond the human. To this Russell replies that the felt need for the divine does not prove its existence. Critics of Russell's social and political philosophy did not receive the cogent answers they might have expected owing to the fact that Russell, as he says, regards most questions in this field as lying outside the scope of philosophy. Thus to specific criticisms he replies, in effect, that much of his work in these fields is not instructional, but largely a personal reaction to the unhappy state of the world.

The philosophy of Edmund Husserl is almost as influential today as that of Russell, although in different circles. Marvin Farber's volume *The Foundation of Phenomenology*, Edmund Husserl

and the Quest for a Rigorous Science of Philosophy, which traces the development of phenomenology and expounds and evaluates its main contributions, will do much to augment the interest in this philosophy. The book contains a thorough analysis of Husserl's *Philosophie der Arithmetik* (1891), and an account of his evolution beyond the psychologism of this book to the logical realism of the *Logische Untersuchungen* (1900-1). The change of mind was due in part to the criticism of the mathematician Frege, who also influenced Russell's development. Farber shows Husserl's relation to other great contemporaries and predecessors: Leibniz, the British Empiricists, Natorp, Schuppe, Schröder, and many others, sifting reviews and polemics buried in books and periodicals seldom consulted today. The major portion of the book is devoted to a condensed translation of the three volumes of the *Logische Untersuchungen*, Husserl's most important work. The classic proportions of this work unfold. The *Prolegomena* (vol. 1), with its stirring attack on psychologism was much acclaimed and disputed, while the six subsequent investigations, which elaborated a whole new science of "intentionality" were little regarded at the time. Years later these painstaking investigations of a priori relations embedded in the tissue of immediate experience, were widely recognized at something like their true worth. By this time Husserl had gone beyond the plane of the *Investigations*. These phenomenological *Investigations* themselves required phenomenological investigation. In his later works Husserl developed phenomenology into the science of transcendental subjectivity, which he regarded as the science of sciences, or as the *only* science, since it gave final vindication to all the others. Farber rejects this subjectivism and idealism, and rightly recognizes the *Logische Untersuchungen* as the greatest achievement, and foundation, of phenomenology. He sums up his understanding of phenomenology as follows: "(1) It is the *first* method of knowledge because it begins with 'the things themselves,' which are the final court of appeal for all knowledge . . . (2) It views everything as an exemplification of essential structures . . . (3) It deals not only with 'real' essences, but also with 'possible' essences. (4) Direct insight, evidence in the sense of self-giveness of the objectivity is the ultimate test of it." Farber goes to great lengths to exclude metaphysics and to interpret even Husserl's later writings, not idealistically, but methodologically.

The best known Catholic philosopher today is Jacques Maritain. He is distinguished not only by his advocacy of Thomism, but by the clarity of his thought, his hatred of fascism and his warm espousal of the cause of the people. Another reason for his popularity is that he has taken great pains, particularly in his best book, *The Degrees of Knowledge*, to present Thomism in relation to contemporary schools of thought. He criticizes, for example, both Russell's and Husserl's views, the latter much less severely. Indeed Husserl's philosophy, e.g. his doctrine of "intuition," has exerted considerable influence on Catholic thinkers.

The *Maritain Volume of the Thomist*, just issued, is a tribute to the philosopher on the occasion of his sixtieth anniversary. Twenty essays, remarkably diverse and of uneven merit, make up the book. Yves R. Simon, who writes on Maritain's philosophy of the sciences, argues that if empiricist science includes in the definition of a chemical substance such as silver, its boiling point, melting point, etc., it is involved in circularity. The solution is to recognize, with Maritain, that

"Whereas the being of things is successfully penetrated by the dianoetical intellection used in philosophy of nature, it is only circumscribed by the perinoetical intellection of empiriological science. . . . With Maritain, the science of phenomena was given for the first time a justification which owed nothing to the idealistic interpretation of the mind's activity." (p. 95) Other essays deal with the Thomist concept of culture, with providence, justice and friendship, peace and diverse historical matters. Emmanuel Chapman writes an enthusiastic appraisal of Thomist philosophy, while Mortimer J. Adler attempts to remedy a defect in the Thomistic argument for God's existence. The most impressive article is "The Theory of Oligarchy: Edmund Burke" by President Robert M. Hutchins. Hutchins argues convincingly that the contradictions in Burke's thought can be explained by his determination "to protect the aristocracy from attack from any quarter. If it came from the King, he would use the people against him; if it came from the people, he would retort on them with the glories and virtues of the established order. . . ." When the attack came from the King and the North ministry, Burke favored the people and upheld the American Revolution, when the threat came from the other side, Burke embraced reaction condemned the French Revolution and led the fight against democracy and freedom.

The philosophers discussed above also figure in a new volume *Twentieth Century Philosophy*, edited by D. D. Runes. Many other schools, and departments, of philosophy are also represented. Herbert Feigl's comprehensive survey of "logical empiricism" is especially interesting, because this international movement makes a great effort to hold together, in bonds of methodological cooperation, many distinguished philosophers and scientists who seem to have little in common, and to preserve the continuity of the movement in spite of surprising shifts and changes of theory. The basis of unity is the famous dictum of Peirce: A difference that *is* a difference must *make* a difference. Or, as Feigl puts it: "If and only if assertion and denial of a sentence imply a difference capable of observational (experiential, operational, or experimental) test, does the sentence have factual meaning." This principle enables logical empirists to unite with operationalists who follow Bridgman and pragmatists who follow Dewey, and to make overtures to scientists and philosophers who appear to employ this principle. It also enables them to reject all metaphysics as meaningless or purely emotive, and to relegate such time honored issues as the mind-body problem and the problem of free-will to the status of pseudo-problems. Feigl is willing to admit that when drastically reformulated, metaphysics might mean something, and he concedes that some of his associates have gone too far. The meaningfulness of a sentence does *not* require, he says, that the means are at hand to confirm it, but merely that it is conceivably confirmable. The value of logical empiricism is to be measured, of course, by its accomplishments. Feigl points with pride to the work of the mathematician, Kurt Gödel, who arithmetized syntax, and discovered that "within the framework of the concepts of any given postulate system, providing the system includes only arithmetic without limitation to the finite, it is possible to formulate problems which cannot be solved with the framework." Carnap has also made unquestioned contributions to the techniques of language and deduction, but the more distinctively philosophical contributions of the logical empiricists enjoy no priv-

ileged place. They are just as frequently, and as destructively, criticized as are the theories of other philosophers. Examples are furnished by the present volume. Thus Everett W. Hall, in his article, "Metaphysics," argues that the logical empiricist opposition to metaphysics is itself a kind of metaphysics, and that it is hardly possible to reject all metaphysics, but only special varieties. On the other hand, V. F. Lenzen's "Philosophy of Science," shows how much one of the best writers in this field has been influenced by logical empiricism. His excellent article ends with a reference to the logical empiricist view that the realism-idealism issue is a pseudo-problem. He notes as important that whereas Helmholtz admitted the possibility of interpreting the facts in terms of subjective idealism, he also "held that the realist (dualist) interpretation is the simplest one." Lenzen, however, concludes: "Whether or not one concedes significance to the issue between realism and idealism the cautious philosopher of science can limit himself to the concept of nature as a scheme for the correlation of experiences."

Another movement of philosophy which takes seriously many of the problems which the logical empiricists regard as verbal confusions, is dialectical materialism. John Somerville, in the same volume, points out that dialectical materialism does not dismiss problems which have been called metaphysical but only objects to the frequent emphasis on changelessness, and on eternal forms as causal agents. Somerville shows that while dialectical materialism looks to the future, it also has its roots in the past. It has learned much from the classic materialists, the Utopian thinkers, Hegel and even from such classic philosophers as Aristotle. Prejudice and ignorance have prevented a better understanding of this philosophy in America, and the author believes that this situation should be remedied in the future.

The continuity of Marxist philosophy with great intellectual traditions of the past is stressed by Howard Selsam, in his *Socialism and Ethics*, but he exhibits the radical divergence of this philosophy from other schools of thought, past and present. What distinguishes Marxist ethics from other systems is, above all, its insistence upon the unity of theory and practice. A great deal of Selsam's book is taken up with historical, economic, and political questions, and with trade unionism and class and social viewpoints which seldom figure in ethical works. In utter contrast to the spirit of Selsam's book is a brief volume, *The Value Doctrine of Karl Marx*, by Prof. Albert G. A. Balz. In a genial, almost whimsical, manner Balz attempts to deepen the meaning of the labor theory of value with the help of Aristotle's metaphysics and the "science of angels."

Marxist books on philosophy inevitably relate theory, however abstract or remote, to immediate social issues. Other schools of thought do so less frequently. An example is furnished by Helmut Kuhn's *Freedom Forgotten and Remembered*, which attempts to show that the German surrender to National Socialism resulted from a forgetfulness of freedom, and from the passions of despair, hate, and resentment. The cure recommended is recollection of freedom, i.e. remembrance of man's real nature, which "implies freedom." Since human nature implies freedom, democracy is an absolute value. On the other hand, Edward W. Strong in "Civilization in Historical Perspective," *Civilization* (University of California Publications in Philosophy, 23), inclines to relativism. He grants that there is a nonhistorical, Platonic escape from

valuational relativity. There is also another way. It is "to assert, after the precedent of Hegel, that there is a World-Historical Spirit" which expresses itself "in parochial and local moments," that "our valuations though apparently relativistic are, in the reality of the Spirit, expressions of its unity." Strong, however, is attracted to Spenglerian relativism. It is not paradoxical, he states, to hold that valuational relativity promises more for efforts to realize the aims of civilization "than a conviction of absolute justification when claimed by any class or nation of men." The quest for absolute justification of value judgments appears in several of the essays in this timely and interesting volume.

Preoccupation with absolutism vs. relativism, organization vs. freedom, leaders vs. followers, is a marked feature of the now expanding literature of the philosophy of history. Questions of method in historiography and the problem of the proper distinction between procedures in history and in the physical sciences, are also prominent. Thus *The Interpretation of History* by Barzun, Holborn, Heaton, Malone, and La Piana, is concerned with the demarcation of history from the other sciences, the part played by imagination, insight, hypothesis, and the economic factor. James Burnham in his *Machiavellians* upholds views of Machiavelli, and of such modern writers as Pareto, Mosca, and Michels. He contends that only an élite can rule scientifically and efficiently and that the masses are incompetent. Democracy, if it has not already done so, will soon disappear. Sidney Hook in *The Hero in History* is also concerned with the causal efficacy of leaders. He contends that the decisions of the leader can determine the course of history at a juncture of two objectively possible alternatives, and that the role of heroes has been underestimated by Marxist philosophy.

Interest in the philosophy of history is also illustrated by the publication of a translation of Jacob Burckhardt's *Force and Freedom. Reflections on History* and by Jacques Barzun's *Romanticism and the Modern Ego*, which argues that "romanticism" is characteristic of expanding, creative periods of history, whereas classicism marks conservative periods.

At least three noteworthy books on the philosophy of education appeared: Jacques Maritain, *Education at the Crossroads*; Robert M. Hutchins, *Education for Freedom*, and Mark Van Doren, *Liberal Education*.

In esthetics we have Henry W. Wells' *The American Way of Poetry* and Bertram Morris' *The Aesthetic Process*. Following both Whitehead and Dewey, Morris emphasizes the process-character of experience. For example, he holds that the esthetic experience cannot be completely expressed by categorical propositions. "The puerile statement 'Dante loves Beatrice' can be nothing but caricature. . . ." Esthetic experience can be expressed only by the "metaphorical judgment" which, though neither true nor false, points to further esthetic realization of the original intention. To show esthetic experience as a dynamic process, the author also develops the Kantian notion of purposefulness as an essential aspect of the art object.

In addition to books listed in the text, the following may be noted: John Elov Boodin, *Religion of Tomorrow*; Ernest Campbell Mossner, *The Forgotten Hume: Le bon David*; Rudolf Carnap, *Formalization of Logic*; Kenneth J. W. Craik, *The Nature of Explanation*; Lewis Edwin Hahn, *A Contextualist Theory of Perception*; Clark L. Hull, *Principles of Behavior*; Robert W. Leeper, *Lewin's Topologi-*

cal and Vector Psychology; Alexander D. Lindsay, *Religion, Science, and Society in the Modern World*; James Marshall, *The Freedom to be Free*; Cale Young Rice, *A New Approach to Philosophy*; Ben-Ami Scharfstein, *Roots of Bergson's Philosophy*; Francis Schoemaker, *Aesthetic Experience and the Humanities*.

Also: Jacob Klatzkin, *In Praise of Wisdom*; Jacques Maritain, *Art and Poetry*; An Inquiry into the *Sociology of Knowledge*; Ananda K. Coomaraswamy, *Hinduism and Buddhism*; Merle Curti, *The Growth of American Thought*.

V. JERAULD MCGILL.

PHOENIX ISLANDS. See GILBERT AND ELLICE ISLANDS.

PHONOGRAPH RECORDS. See PLASTICS under *New Uses*; MUSIC.

PHOSPHATE, SUPERPHOSPHATE. See CHEMICAL INDUSTRIES; CHEMISTRY under *Fertilizer*.

PHOSPHORESCENCE MICROSCOPE. See PHYSICS.

PHOSPHORUS. See CHEMISTRY.

PHOTOCHEMISTRY. See CHEMISTRY.

PHOTOGRAPHY. The mighty task of training millions of men and women in the grim business of global war and of recording the progress of that terrible conflict was aided greatly by photography. One out of every ten adults in the United States, according to the Office of War Information, was expected to be in training by the end of the year and nine out of ten of those in training were being instructed partially by photography. Almost every service man or woman had one or more photographs of their dear ones and these humble snapshots were regarded as treasured possessions. At home, civilian use of photography was restricted greatly by the curtailment and rationing of chemicals and materials. Manufacturers of photographic goods struggled with the problems of war production, including nonphotographic items such as fire-control instruments, metal pontoons, and height finders, in addition to their regular line of work. Much new knowledge was being acquired from this war experience, and it was predicted that this knowledge would be used effectively to bring out new materials and equipment when the world was again at peace.

Photography in the Armed Forces. Approximately 300 new films were completed during the course of the year by the U.S. Army Signal Corps, bringing the total to over 700 films. The majority of these were black and white, but a few of them were in color. All films were distributed through the libraries located in the nine different Service Command areas. Many hundreds of film strips were also in daily use. These strips each had about fifty separate pictures and titles, covering subjects that usually could be taught better with the still picture than with a motion picture. One of the most useful applications of the film slide was in connection with a course on recognition of aircraft and warships by the Renshaw system. A "flash projector" was used to project the image on the screen for a controlled time, say for several seconds. The viewing time was shortened every day during the eight-week period for the course and at its conclusion, the student was expected to identify 168 planes and ships in $\frac{1}{75}$ th second each.

Motion pictures of enemy planes in combat were used in several ways to train gunners of the Army and Navy Air Forces. Although no cartridges were fired by the guns used, the weapons were connected by optical and electrical means to indicator boards to show the instructor when the gunner was "on target" as he fired at the projected picture of the

planes. Recoil action and gunfire sounds occurred when the trigger was pressed. (*Pop. Science*, 143: 65, Sept., 1943).

Two new types of motion picture material were added to the lists of visual aids being distributed by the U.S. Army Pictorial Service. These were the Informational Films and the Film Bulletins. The former were intended to provide "historical and general background information on the war," and the latter were "designed to inform military personnel of current activities and developments. . . ." (*J. Soc. Mot. Pict. Eng.* 41: 255, Sept., 1943).

Training film activities of the U.S. Army were discussed in ten papers at a symposium of the Society of Motion Picture Engineers in New York in May. Subjects treated included psychological factors, production problems, animation, sound recording, distribution, and utilization. All papers were published in the September, 1943, number of the Society's *Journal*.

Throughout the country at various army posts, training films and entertainment films were shown under the auspices of the U.S. Army Motion Picture Service. Welpley reported that by the end of the year, 1,000 post theaters were expected to be in operation requiring the services of 5,000 enlisted men to operate them. The seating capacity of these theaters was about 750,000, providing over 150 million admissions yearly. (*J. Soc. Mot. Pict. Eng.* 40: 4, Jan., 1943).

Operational and tactical information was obtained in the actual combat areas or "theaters of war" by small groups of photographers called combat camera units. (*Commercial Phot.* 18: 402, Sept., 1943). The size of these groups varied from two to ten or more men, each of whom had been trained in the use of weapons as well as photographic equipment. They had to be in the thickest part of the action and sometimes were even ahead of the troops in their outfit. For example, it was reported by Lieutenant Colonel MacDonald, who directed the photography of the great documentary film, *Desert Victory*, that 17 men out of their starting force of 32 photographers had either been killed, wounded, or captured during the 80-day advance of the British 8th Army from El Alamein to Tripoli. (*Amer. Cinemat.* 24: 167, May, 1943). Problems facing combat camera units in the U.S. Army Air Force were discussed by Jestor (*J. Soc. Mot. Pict. Eng.* 41: 136, Aug., 1943). The fine work of the Soviet camera units has been well known since Russia entered the war (*Amer. Cinemat.* 24: 168, May, 1943).

Radiophoto service was started by the U.S. Army during the year from the European and South Pacific war theaters of operations. True copies of photo reconnaissance records, maps, orders, and other important data could be flashed for study without delay. (*Army Ordnance Bull.* No. 34, Aug. 15, 1943, p. 4).

The important task of assembling photographs of enemy harbors, airfields, beaches, highways, railroads, and other strategic locations was carried out by the Office of Strategic Services, a civilian agency operating under the joint chiefs of staff of the U.S. Army and Navy.

Hundreds of thousands of U.S. Army Air Force personnel received the benefit of specialized instruction with the aid of the training film program which was started in 1937. According to Colonel Carr, it was "General Arnold's wish that the training film program be integrated with the instructional courses being given within the Air Forces." The Training Aids Division was organized to serve as the central agency to coordinate this develop-

ment. Production units for training films were maintained at Culver City, Calif., and at Wright Field, Dayton, Ohio. Films made by various aircraft manufacturers were also utilized by the Army Air Force for training. (*J. Soc. Mot. Pict. Eng.* 41: 329, Oct., 1943).

In the ten months previous to June, 1943, the Director of the U.S. Geological Survey (q.v.) reported that approximately 1,500,000 square miles of the earth's surface had been photographed by the U.S. Army Air Force and charted. The pictures were taken by using the Tri-Metrogon system, which consisted of a group of three cameras, one vertical camera, and two oblique cameras in each installation. About 8,000 square miles could be photographed daily. The actual mapping job was done by a staff of 250 technical personnel at the Geological Survey. Planimetric detail was transferred from the photographs to the map sheet by means of a camera lucida type of device known as a "Sketchmaster." Such reconnaissance maps provided invaluable data for movement of troops and planning of battles. (*Commercial Phot.* 18: 395, Sept., 1943).

Research in aerial photography for the U.S. Army Air Force was done largely at the Aerial Photographic Laboratory at Wright Field near Dayton, Ohio. An illustrated article in *U.S. Camera* magazine for October and November described many of the new techniques (as many as could be told) that had been developed in recent years. With the new telephoto lenses, of focal length as much as 60-inches, signs can be read clearly on building roofs shown on pictures taken from an airplane flying $7\frac{1}{2}$ miles above the earth; on low altitude pictures the "A" sticker on an automobile windshield could be distinguished on the photograph made while the plane flew better than 400 miles per hour just over the tree-tops. Entire coast lines of a country could be shown on one long roll of paper with the aid of the new strip camera (see under *New Apparatus* below). As the war progressed, the results of this intensive research program became more and more significant. The aerial photograph had proved its usefulness on every important mission of the war.

Stereo air photographs, taken by R.A.F. reconnaissance photographers, showing bomb damage in Germany and Holland were reproduced in an English magazine (*Miniature Camera* 7: 417, Sept., 1943).

The U.S. Navy established its Training Film Branch of the Bureau of Aeronautics in July, 1941, and all requests for films and film strips were handled through this agency. Problems in the production of training films for the Navy were discussed by Goldner (*J. Soc. Mot. Pict. Eng.* 41: 146, Aug., 1943). Like the Army films, these training aids were intended to supplement other types of instructional material and actual field experience. Approximately 2,400 units of these training aids had been finished by the close of the year, representing about 1,800 slide-films and 600 motion pictures.

Many hundreds of photographers were graduated from the U.S. Navy Photographic School at Pensacola, Fla., during the year. A rating of first class seaman or higher was necessary to gain entrance to this school, or if the applicant was an expert civilian photographer, enlistment in the "V-8" classification was required. Basic training in theory and practice of making pictures was followed by specialized instruction in sensitometry control, motion pictures, and aerial photography. The student learned to use many types of cameras, to do special processing, corrective printing, and map laying (*Pop. Photography* 12: 22, Jan., 1943).

A modern well-equipped photo-laboratory was completed for and occupied by the U.S. Navy at the Naval Air Station, Anacostia, D.C. This was known as the Naval Photographic Science Laboratory. According to a press release of the Navy Department, the building was to be staffed initially by about 700 Naval personnel, made up almost entirely of specialists. About 85 of these received advanced training in the handling of specialized processing equipment at the Eastman Kodak Company, Rochester, N.Y. The primary functions of the laboratory were to supervise the training and assignment of skilled photographers and technicians to fleet and shore activities, to check and test aerial and motion picture cameras and all other Naval photographic equipment, and to make new technical developments and improvements in equipment, operation, and training. (*Phot. Trade News* 7: 7, Feb., 1943).

Mortimer published another of his authoritative reviews of the role of photography in the war. (*Phot. J.* 83: 98, April, 1943).

Color Photography. Amateur and professional photographers continued to make the majority of their color pictures on Kodachrome, although the war naturally put certain restrictions on the supply of this film. Thousands of color prints were made daily from Kodachrome transparencies either as Minicolor (from 35-mm Kodachrome) or as Kotavachrome (from sheet Kodachrome). For the roll film user, Kodacolor film and prints were growing in popularity. The older processes of carbro and wash-off relief remained in favor for many commercial illustrative photographers.

Color motion pictures by an improved Agfacolor process were reported by a Swiss publication to have been shown at Dresden in October, 1942. A faster film emulsion and better projection with the aid of a "honeycomb" condenser were claimed. The film was the Ufa production, *The Golden City*. (*Camera*, Luzern 21: 191, Feb., 1943).

The armed forces used Kodachrome extensively for training and combat purposes. One of the best color documentary films of the year was the War Department picture, *Report from the Aleutians*, produced by the Signal Corps and released to the public through the War Activities Committee. The Technicolor release print was made from the edited Kodachrome original, which was taken on the ground and in the air.

More Technicolor feature pictures were made than in any previous year, the *Film Daily* reporting in September that 21 pictures had been released and 24 others were in preparation. For one picture, *This Is The Army*, it was said that 450 Technicolor prints were made. Another remarkable color picture was the Disney production of Major de Severisky's book, *Victory Through Air Power*, released by United Artists Corporation.

Information about a new color film, Kodacolor Aero, was released by the Army and Navy in May (*Life* 14: 59, May 10, 1943). With this film it was stated that exposures of the order of $\frac{1}{150}$ th second at f/8 could be made. Trouble with atmospheric haze at high altitudes could be counteracted with special filters. The article also said that this color film "can be processed and developed anywhere, even in tent darkrooms on the battlefield." Several color illustrations were published with the article to show the detail and range of color contrast revealed with the use of this aero film.

Technical details of the Ansco Color Film process were published in October; the product was announced in July, 1942. This film was stated to be of the three-layer type, requiring development to pro-

duce first a black-and-white negative image in each of the three emulsion layers. It was then bleached to remove the negative silver images, given a second exposure, and developed in a paraphenylenediamine type developer giving reaction products which combine with colorless substances in the three layers to produce dye images in the three subtractive colors, cyan in the lowest layer next to the base, then magenta, and finally a yellow image on top. The processing could be done by the user. A color paper for making color prints from three-color separation negatives was said to be available; the processing requirements were stated to be similar to those recommended for the color film. Distribution of all of these new color materials was restricted to the armed forces until after the war.

Motion Picture Photography. Travis discussed the allocation problems facing the motion picture industry in view of the demands of the war. Much greater conservation of materials, especially films and equipment, was necessary after the War Production Board issued Order L-233 on Dec. 16, 1942. A very high standard of product was maintained and in addition every motion picture studio devoted a portion of its production time to the making of pictures to aid the war effort. Many of the new developments are in the restricted category and will probably not be discussed until after the war. Two technical conferences were held by the Society of Motion Picture Engineers, at New York in May and at Hollywood in October. The major portion of the reports at these sessions were given by members of the armed forces. A complete issue of the magazine *Business Screen* (Vol. 5, No. 1, 1943) was devoted to articles dealing with the film programs and equipment of the U.S. Department of Agriculture.

Causes of lack of sharpness of a projected motion picture were studied by Carver, Talbot, and Loomis and the results reported in a paper on the effect of high intensity arcs upon 35-mm film projection. High-speed motion pictures were used to analyze the movement of the film in the projector gate. (*J. Soc. Mot. Pict. Eng.* 41: 69, July, 1943; also *ibid* p. 88). See **MOTION PICTURES**.

Physical Measurements. An important accomplishment after nearly three years of trial and criticism was the final approval of the "American Standard Method for Determining Photographic Speed and Speed Number." (*J. Opt. Soc. Amer.* 33: 479, Aug., 1943). In the Thirteenth Hurter and Driffield Memorial Lecture before the Royal Photographic Society, Rawlings summarized the more important steps that have been taken to standardize the measurement of density and exposure. (*Phot. J.* 83: 49, February, 1943). Selwyn reported on investigations of graininess and granularity. He showed that it is possible to estimate print graininess from measurements on the negative material. He suggested a formula for specifying the graininess of a negative material and checked this proposal by direct experimental tests on prints. (*Phot. J.* 83: 227, June, 1943).

Manufacture of Sensitized Materials. As a result of the very great increase in the orders for photographic materials from the armed forces and the restrictions placed on the manufacture of film and film base by the government (WPB Limitation Order L-233) the quantity of film for civilian use was drastically reduced. The war provided a good excuse, however, for the manufacturer to take inventory of the demand for all items and to eliminate many that were being used only to a slight extent. Methods of manufacture were adjusted to permit the machines in these factories to operate at maxi-

mum capacity. No new films or plates were permitted except for special needs of the government.

Improved materials were made available for use in the phototemplate process for speeding up the design and manufacture of airplanes, ships, and vehicles for use in mechanized warfare. Some of these products were applied directly to metal surfaces and others were coated on paper for subsequent transfer to other surfaces. Batley and Coppin discussed these developments particularly as they applied to techniques and equipment used in Great Britain (*Aircraft Production*, 5: 107, March, 1943; *ibid* 190, April, 1943; also *Phot. J.* 83: 132, April, 1943).

Several types of recording and reflex copying papers for industrial photography were introduced. Large quantities of paper having a waterproof base were being made for the Navy and the Air Force. This product has the very useful property that it changes only slightly in size during processing and can be washed and dried rapidly. The older type double-weight Aero Mapping Paper was replaced by two new types of waterproof single-weight paper known as Aero Contact and Aero Enlarging. An interesting discussion of the many intricate problems facing the photographic manufacturer was given by the President of the Royal Photographic Society, Donald McMaster, who also dwelt upon the extensive research program that was being conducted by various laboratories in this industry. (*Phot. J.* 83: 164, May, 1943.)

Photographic Apparatus. Many improvements were known to have been made in ground cameras and aero cameras for the armed forces but details of these were not released except in limited instances. Besides those cameras used for direct records of scenes and action, there were many types of specialized equipment in use, such as the Zenith Camera, which enable the exact latitude and longitude of aerial photographs to be determined. This device consists of (1) a camera which was used at night to photograph the sky around the zenith; (2) another camera for photographing three navigation watches, and (3) an automatic timing equipment for keeping the two cameras synchronized. Accuracy was believed obtainable within 40 or 50 feet, an outstanding achievement in view of the earth's circumference of 131,000,000 feet.

One of the most unique camera developments of the year was the shutterless, continuous strip camera of the U.S. Army Air Forces. This camera produced a continuous picture by drawing the film across a narrow slit at a speed synchronized with the speed at which the image passed in front of the lens. The operation of this camera was automatic by remote control, permitting a pursuit ship pilot to use it, to record on a single film strip (either in black and white or on the new color film) several hundred miles of coast line or a strategic railroad or canal. Prints were made rapidly by contact on the Sonne strip printer. (*Life* 14: 59, May 10, 1943; also *Business Week* 733: 60, Sept. 18, 1943).

New photo-trailer laboratories for processing aero film and paper rapidly on automatic machines were designed and constructed for the U.S. Army Air Forces by the Eastman Kodak Company. Each processing unit consisted of two trailers, one for developing the negative and the other for making the prints. Besides special equipment for rapid processing of film and paper, the temperature and humidity of the air in these mobile darkrooms was controlled with auxiliary machinery. The only external requirements were a supply of tap water and gasoline. (*Phot. Trade News* 7: 8, March, 1943).

A new portable darkroom outfit permitted devel-

opment, enlarging, and copying to be done anywhere in the field by Army, Navy, and Marine photographers. All necessary materials including a miniature 35-mm film camera, chemicals and a daylight developing outfit, enlarger, etc., were packed very compactly in a box less than two cubic feet in size. With an auto battery as a current supply and a truck or tent for a darkroom, or even working in the open at night, excellent photographs could be produced.

A new precision miniature camera using 35-mm film had the novel features of reflex viewing and a coupled range finder. It was equipped with an f/2.8 lens of 5 cm. focal length and a focal plane shutter with speeds to $\frac{1}{4000}$ th second. This device, known as the Alpa Reflex, was made by the firm of Pignon, Ballaigues, Switzerland (*Miniature Camera* 7: 407, Sept., 1943).

Methods for analysis of motion were discussed by Phillips and Davies (*Proc. Royal Inst. Great Britain* 32: 384, 1942). Various applications of high speed photography and motion pictures were dealt with by Eyles (*Phot. J.* 83: 261, July, 1943). These papers pointed out the great usefulness of such special equipment for analyzing defects in rapidly moving machinery. Smith gave details of a new model of a high speed camera, called the Fastax, with which pictures could be exposed at 8,000 per second on 8-mm film or 4,000 per second on 16-mm film. A continuously rotating prism or optical compensator was used to form successive images on the moving film (*Bell Lab. Record* 22: 1, Sept., 1943). The new Eastman High Speed Camera, Type III, permitted photographs to be taken at from 500 to 3,000 exposures per second on 16-mm film. Another camera operating on a different principle was used to study the movement of liquid sprays such as automobile carburetor jets. The exposure was one-tenth-millionth of a second by means of a high-intensity spark gap (*Phot. Trade News* 7: 19, March, 1943). The Hercules Experiment Station employed a rotating drum and mirror camera set in an explosion-proof shelter to photograph detonation waves of explosions moving as fast as 25,000 feet per second (*Sci. Amer.* 169: 124, Sept., 1943).

Many millions of letters, drawings, and other documents were being copied on 16-mm film for rapid transmission by air across the oceans of the world. This plan was called the "Airgraph" as used by the British and "V-mail" as employed by the U.S. Government.

A useful compilation of data on various types of microfilm reading machines was assembled by Litchfield and Bennett (*Special Libraries* 34: 15, Jan., 1943, et seq.). Tate of the National Archives designed a very compact reader which could be shipped by air to distant parts of the world, especially the interior of China where such equipment was urgently needed (*Library J.* 68: 414, May 15, 1943). A selected group of magazines were being microfilmed by the Library of Congress for transmission to China and other remote points where such literature was practically unavailable.

The Photographic Process. Evans and coworkers published further data on the chemistry of developers and development. Subjects discussed included a polarographic method of analyzing for copper and sulfide in a developer and factors affecting the accumulation of iodide in used photographic developers. (*J. Soc. Mot. Pict. Eng.* 40: 88 and 97, Feb., 1943).

The nonadditive properties of elon-hydroquinone developers were discussed by James, who showed that this effect agrees with theoretical considerations. (*J. Phot. Soc. Amer.* 9: 62, Feb., 1943).

James also discussed the role of sulfite in developers with regard to the induction period. (*Amer. Phot.* 37: 12, May, 1943; *ibid* 24, Sept., 1943). Still another interesting paper by this author dealt in simple exposition with the study of development, particularly the reaction between the silver ion and the developing agent, and the reaction of pure silver halide with the developing agent. (*Amer. Phot.* 37: 18, Nov., 1943; *ibid* 14, Dec., 1943).

The important subject of developer agitation and its effect on density, uniformity, and rate of development was studied by Ives and Jensen who analyzed various methods of agitation in relation to the problems of machine design. (*J. Soc. Mot. Pict. Eng.* 40: 107, Feb., 1943).

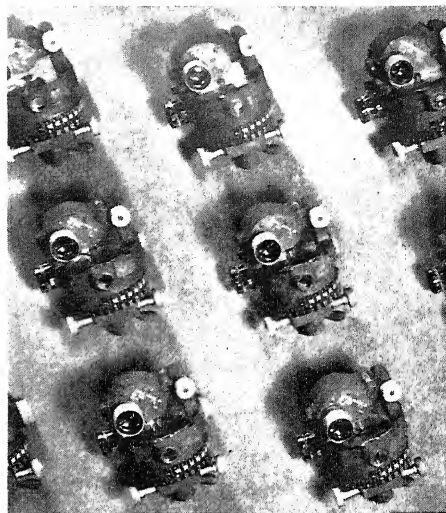
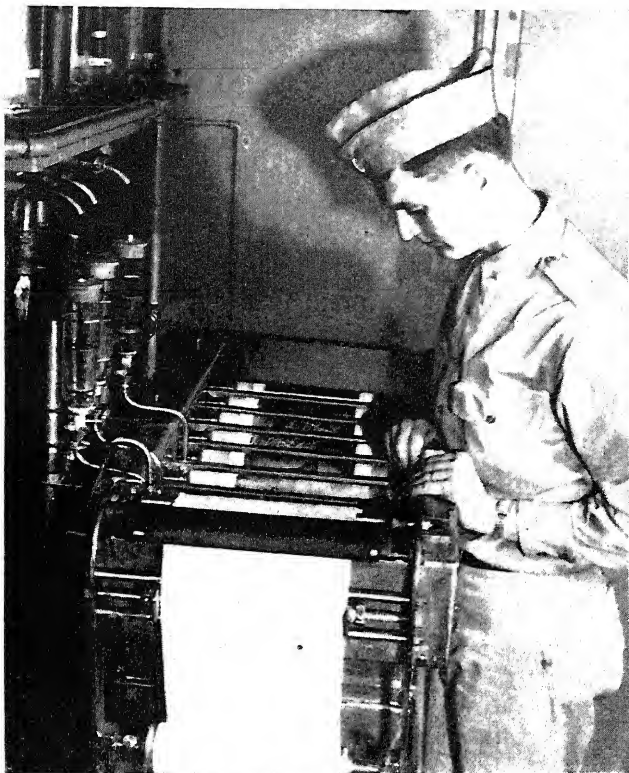
A long article containing much factual data on the methods of removal of hypo and silver salts from photographic materials to insure maximum permanency was published by Crabtree, Eaton, and Meuhler. (*J. Soc. Mot. Pict. Eng.* 41: 9, July, 1943). (See also 1944 *Amer. Ann. Phot.* 58: 45, 1943.) The same authors presented data on the use of silver nitrate for the quantitative determination of hypo in prints. (*J. Franklin Institute* 235: 351, April, 1943). Useful information on the washing of films and prints in sea water was given by Eaton and Crabtree, who showed that removal of hypo is accelerated greatly as compared with fresh water. A final short wash in fresh water is recommended. (*J. Soc. Mot. Pict. Eng.* 40: 380, June, 1943).

Practical formulas for rapid fixing baths containing ammonium thiosulfate were published by Ahnutt. It was shown that the speed of fixation of ammonium thiosulfate is greater than sodium thiosulfate or mixtures of ammonium chloride and sodium thiosulfate (*J. Soc. Mot. Pict. Eng.* 41: 300, Oct., 1943). Elvegard determined the effect on the time of fixing x-ray film by the addition of different nitrogen-containing organic and inorganic substances. Ethylene diamine, propylene diamine, and hydrazine gave the greatest increase in fixing rate. (*Phot. Ind.* 40: 249, Sept. 29, 1942).

Bibliography. A technical photographic society was formed in Great Britain under the name "The Association for Scientific Photography." It was announced that proceedings of their meetings would be published as soon as conditions permit. As a result of the government restrictions on the use of paper stocks, very few photographic books were published. The more noteworthy were the following: Jacobson, C. I., *Home-Made Papers, Films and Plates* (Focal Press, London); Strasser, A., *Victorian Photography* (Focal Press, London); Wyble, E., *Sell Your Photographs* (American Photographic Publishing Co., Boston); Abel, Charles, *Who's Who in American Portrait Photography* (Cleveland); Greenwood, H. W., *Document Photography* (Focal Press, London); Smith, H. T. U., *Aerial Photographs and Their Applications* (D. Appleton-Century); Heavey, W. F., *Map and Aerial Photo Reading Simplified* (Military Service Publ. Co., Harrisburg); Eardley, A. J., *Aerial Photographs: Their Use and Interpretation* (Harper); Falk, N., *How to Make Animated Cartoons* (Foundation Books, New York); Cricks, P. H., *The Complete Projectionist* (Kinematograph Publications, London, 3rd ed.); Cox, Arthur, *Photographic Optics* (Focal Press, London).

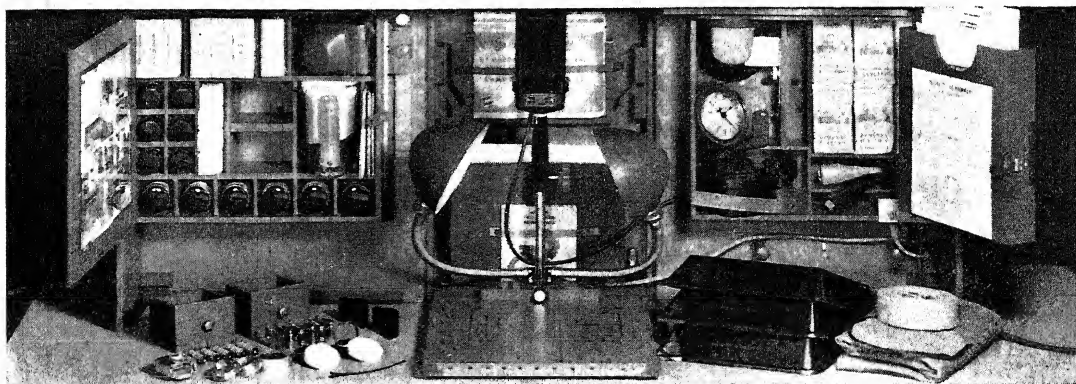
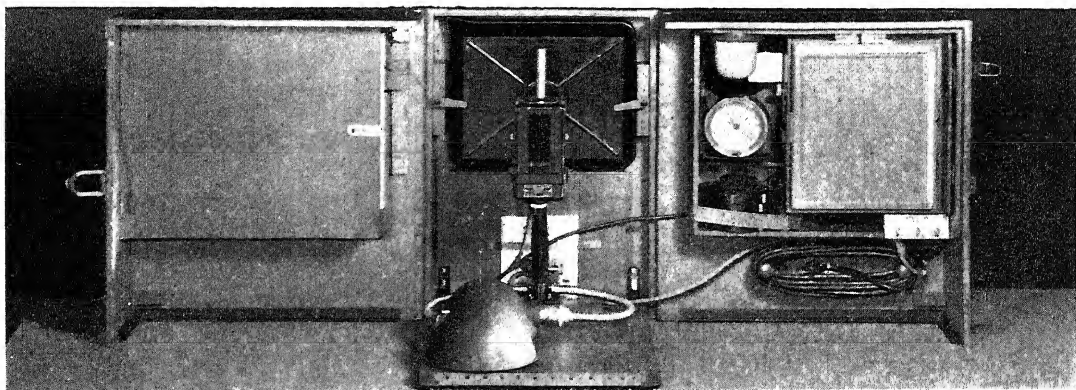
See GEOLOGICAL SURVEY; ILLUMINATION; PHYSICS; PULITZER PRIZES. Compare MOTION PICTURES. GLENN E. MATTHEWS.

PHOTOTEMPLATE PROCESS. See PHOTOGRAPHY.



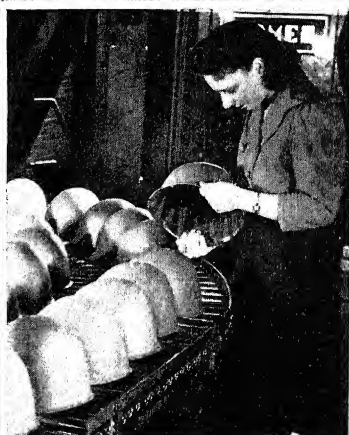
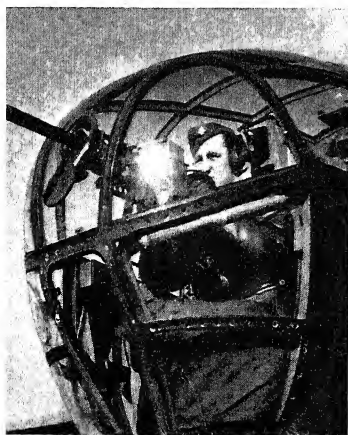
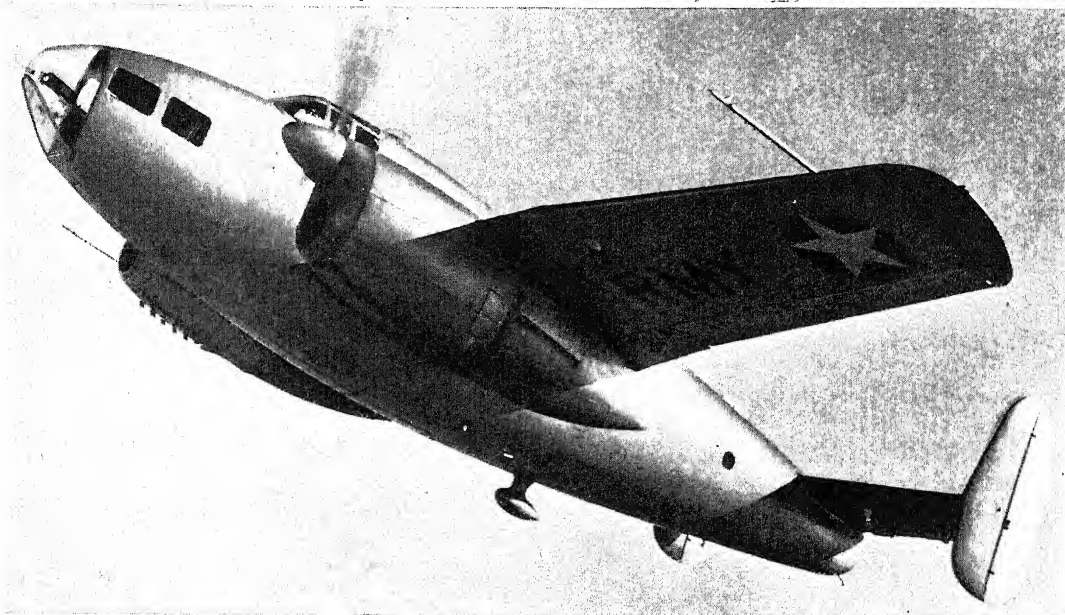
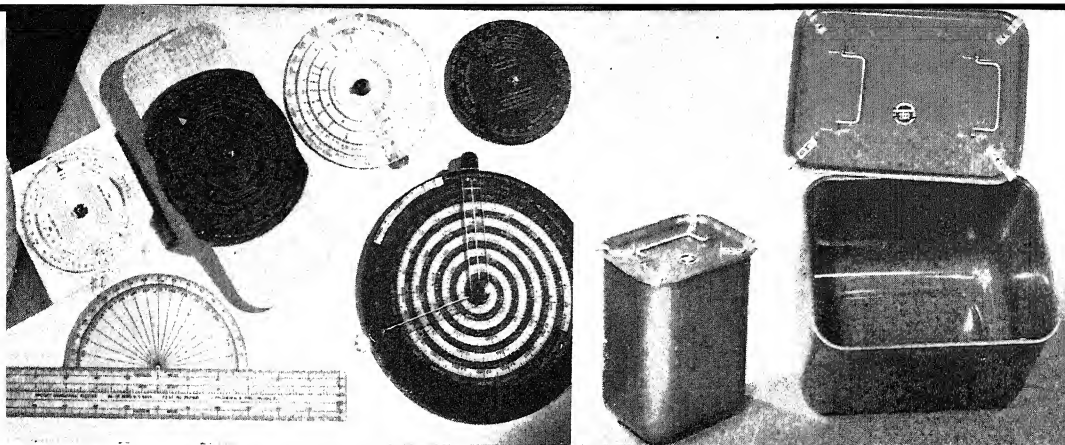
Above: High precision aiming circles for the artillery—example of a war product manufactured by a photographic concern (Eastman Kodak Company).

Left: A roll of aero photographs being developed in an automatic processing machine in the U.S. Army N-3 Photo Trailer (U.S. Army Air Forces Photo).



THE CAMERA AS A "FIGHTING REPORTER" IN WORLD WAR II

The new portable darkroom outfit, U.S. Army PH-261 Photographic Set, is shown in the two views immediately above—with sides opened back and, at bottom, with contents displayed. It occupies less than two cubic feet (Eastman Kodak Company).



PLASTICS IN RECORD PRODUCTION FOR VITAL NEEDS

Top left: Aircraft Navigational instruments of Vinylite (Carbide and Carbon Chemicals Company). Right: Food containers for the U.S. Army Medical Corps coated with Bakelite (Bakelite Corporation). Center: Bomber-crew trainer built primarily of phenol resin-bonded plywood formed by the Duramold process (Bakelite Corporation). Below, left to right: Bombardier enclosure on North American B-25 of Plexiglas (Rohm and Haas Company). A bearing of Micarta being machined to exact size (Westinghouse Photo). Plastic part of the Army's two-part helmet, to which an outer steel shell is added for front-line combat (Westinghouse Photo).

PHYSICAL FITNESS, Committee and Council on. See FEDERAL SECURITY AGENCY.

INFORMATION OMITTED AT THE REQUEST OF THE
U.S. WAR DEPARTMENT

PHYSICS. The absorption of physicists in war research continues at a very high level and promises to continue so for the duration. During 1943 some of the fruitfulness of secret war research was made known, as in the announcement of the existence of radar and its general principles.

Emergency educational programs of the Army and Navy were inaugurated during the year for exceptional young men who were placed in special courses in various colleges. Physics was heavily accented in this special training.

Radar. [Editor's Note: Shortly after the publication of the previous edition of the YEAR BOOK, the restrictions on publication of information about radar were relaxed, and the author of this article prepared an account of its development for publication here. Since that time restrictions have been reimposed and the U.S. War Department requested that the material be deleted. In view of the interest on the subject the War Department was asked to review its earlier decision. The review was courteously granted, but the request for omission was repeated. The delay accounts for the gap which unfortunately appears on this page. At such time as security permits the material will be printed in full.]

INFORMATION OMITTED AT THE REQUEST OF THE
U.S. WAR DEPARTMENT

INFORMATION OMITTED AT THE REQUEST OF THE
U.S. WAR DEPARTMENT

INFORMATION OMITTED AT THE REQUEST OF THE
U.S. WAR DEPARTMENT

Hundred Million Volt X-Rays. The production of 100,000,000 electron volt X-rays through use of the new giant induction accelerator of the General Electric Company promised to usher in a new era of X-ray utilization. In one stupendous step from about 2,000,000 volts to fifty times that potential, X-rays of a new sort with extraordinary penetration were made available, first for experimental work and then for industrial and possibly medical use.

The scientists operating the new machine noted that it may be easier to protect people against the 100,000,000 volt X-rays. This is possible because whereas the lower voltage X-rays are spread out fan-like, the super X-rays are produced in very narrow beams. What the world's most powerful X-rays can do is still to be determined.

The induction accelerator, or betatron, as it is also called, operates on a principle different from the customary X-ray tube now in wide industrial and medical use. Developed by Dr. D. W. Kerst of the University of Illinois, the induction accelerator was first built in a 2,300,000 volt version and then as a 20,000,000 volt machine which was turned over to Dr. Kerst and the University of Illinois for research use. Meanwhile construction of the 100,000,000 volt machine was hurried along as fast as more urgent war work would allow because of the expectation that the X-rays it makes pos-

INFORMATION OMITTED AT THE REQUEST OF THE
U.S. WAR DEPARTMENT

sible might prove practically useful in inspection of large metal castings. Previous steps leading to the 100,000,000 volt X-rays were described in the YEAR BOOKS for 1940, 1941, and 1942.

In principle the new X-ray machine gives electrons, particles of electricity, a continuous push so that a potential of a few thousand volts is built up to one hundred million volt energy, which is allowed to smash into a target to produce the super-powerful X-rays. In the conventional Coolidge X-ray tube the electrons from a hot filament are given the impulse of a high voltage current separately generated.

About 50 conventional X-ray tubes of a million volt energy are in industrial use today. The only other device creating such energies in particles is the cyclotron which has been placed under construction at Berkeley, Calif. This machine uses a different principle and instead of accelerating electrons to give X-rays applies high speeds to the hearts of atoms, such as the protons of hydrogen and the deuterons of heavy hydrogen or deuterium. See ELECTRICAL INDUSTRIES.

Electrical Fire Director for Artillery. A new electrical fire director for artillery was demonstrated publicly by the Ordnance Division of the U.S. Army and the Bell Telephone Laboratories.

Cannoneers rapidly load and fire anti-aircraft guns, but no gunners peer through sights at the aerial targets. Training of the guns, as well as proper adjustment of fuze setters for the shells, is taken care of yards away by a single mechanism operated by a few men, who keep telescopic sights fixed on the target and adjust a few dials. The firing data, automatically calculated inside the machine, are also automatically expressed in terms of electrical currents which are fed through cables to motors controlling the movements of the guns.

Superficially, the new fire control instrument looks much like the mechanical devices already in use for this purpose. Inside, however, it is totally different. Previous fire control instruments use trains of cams and gears to translate movements of telescopic sights and dial adjustments into terms of predicted position of the target at the time of shell burst. The new instrument eliminates the mechanical train and uses instead an electrical hook-up, which is even more accurate and much more sensitive, since it can include variable factors not taken into the calculations of existing machines.

Elimination of the metallic cams, gears, and shafts of the mechanical train automatically does away with one source of error: temperature changes cause expansion and contraction of metal parts, but have practically no effect on the new electrical mechanism. Another improvement that has been introduced is a smoothing effect, that automatically ignores sudden, jerky movements sometimes necessary in making quick changes of adjustment. By the time the final integration made by the instrument, suitably stepped up to the power necessary, begins to swing the heavy guns, the changes have become even and steady, corresponding more closely to the actual motion of the target in the air.

The fire control instrument demonstrated was of the mobile type, suitable for accompanying anti-aircraft guns traveling with an army. The system is equally well adapted for use in fixed positions on land and on shipboard. See MILITARY PROGRESS.

Electron Microanalyzer. Chemical elements composing such extremely minute sub-microscopic objects as the tail or head of a germ or a virus, par-

ticles no larger than $\frac{1}{100,000}$ th of an inch in diameter, are identified in a few minutes by a new instrument, the electron microanalyzer, developed by Dr. James Hillier of RCA Laboratories. Used in conjunction with the electron microscope, the new instrument will allow the determination of the composition as well as the size, shape, and internal structure of the particles which a few years ago were quite beyond the most powerful means of exploration in the microscopic world.

In the electron microanalyzer a very small area of the specimen is irradiated with an electron probe, a stream of these particles of electricity brought into a beam by a two-stage magnetic lens system. The electrons transmitted by the irradiated area of the specimen are focused by a third magnetic lens so that the electron probe is reformed. The amount of energy lost by the electrons is measured through a photographic exposure, and the position of markings in the electron velocity distribution indicates the presence of a chemical element in the specimen.

Before the extra information being revealed by the electron microscope can be applied to problems of the physical, chemical, and biological sciences, it must be translated into a form that is of significance to the individual problems being investigated.

Phosphorescence Microscope. A new kind of microscope, that promises to open up new fields for exploration in biology and mineralogy, was devised by Dr. E. Newton Harvey and Dr. Aurin M. Chase of Princeton University. It was called the phosphorescence microscope because it makes use of the short-lived phosphorescent glow given off by many substances just after they have been exposed to the action of ultraviolet radiation.

That many things shine in the dark with peculiarly-colored visible light when invisible ultraviolet rays strike them is a well-known phenomenon. This light is called fluorescence; and it has been much used in research during recent years. Special fluorescence microscopes have been devised to aid in this work. When the ultraviolet irradiation stops, fluorescence stops with it. However, it has frequently been noticed that some of the irradiated substances keep on glowing briefly after the ultraviolet lamp has been turned off. This glow, in many cases lasting for only a fraction of a second, has been termed phosphorescence. Among the substances showing this property are human teeth, wool, coral, dried potato, and several other materials of both animal and plant origin.

Because of the short duration of this phosphorescence, ordinary microscopic observation has not been possible. Drs. Harvey and Chase, however, thought of the expedient of getting a large number of intermittent flashes, so close together that they appear to merge into one continuous illumination, like the rapidly succeeding "frames" of a motion picture. Several different means for achieving this end have been devised. In some, the ultraviolet ray source is an intermittent spark, with a rotating shutter shielding the object-lens of the microscope while it is "on" and opening it for the passage of the phosphorescent flash when the spark is "off." Simpler, however, is a continuous source of ultraviolet with a double rotating shutter having staggered openings that alternately admit the ultraviolet rays and open the path for the phosphorescent light to the lens.

Colored Ultraviolet Microscopic Image. A new field of microscopic research was opened by a microscope which converts an invisible ultraviolet image

into a visible picture in full colors. The microscope was devised by three Russian scientists, E. M. Brumberg, S. Gershgorin, and P. Radchenko of the State Optical Institute of Leningrad.

The colored image has the same advantage that the use of colors has on a map in making the various parts stand out in stronger contrast. It permits also the use of ultraviolet stains to make visible details that would otherwise be invisible, just as the biologist now uses visible stains with the ordinary microscope for the same purpose. This is of great importance not only in biology but also in micro-chemistry.

The colors of the image correspond to and are an index to the different wavelengths of the ultraviolet light used to illuminate the object. The image is thus shifted in wavelength from the ultraviolet to the visible.

Ultraviolet light has long been used in high-power microscopes because its short wavelength permits smaller details to be revealed than would be revealed by the longer waves of visible light. But the image, being invisible, had to be photographed or caught on a fluorescent screen, and gave, of course, the ordinary black and white photograph or a one-color image.

To obtain a colored picture, a sort of ultraviolet version of three-color photography was devised. The object was photographed with three different wavelengths of ultraviolet light, and the three negatives were then reproduced with the aid of red, green, and blue light. The combination of course gives all the other colors.

To obtain a directly visible image without the use of photography the images given by the three ultraviolet wavelengths were thrown on a screen covered with three fluorescent substances which respond to the three ultraviolet radiations with red, green, and blue light respectively. In a later form a white fluorescing screen was used and the colors were given by an arrangement of rotating disks and light filters.

All this would have been quite easy to accomplish but for one thing. No microscope objective existed that could take care of the large range of ultraviolet wavelengths required. Existing ultraviolet microscopes use monochromatic or one-wavelength light, for the reason that it is impossible to make a satisfactory achromatic lens for ultraviolet light. An uncorrected lens used with visible light produces rainbow-colored fringes around the image, as can be seen when you form an image of the sun with a magnifying glass. With ultraviolet light of many wavelengths similar fringes are formed, giving a blurred image which is quite useless. To overcome this difficulty and put the method into successful practice, a brand new microscope objective had to be devised and this was done. It is an ingenious combination of tiny concave and convex mirrors, for the mirror has no chromatic aberration. For this reason, too, the mirror has largely supplanted the lens in our great modern telescopes.

"Quantum" of Energy. The smallest "quantum" of energy, the amount that would be emitted by a single atom making one vibration per second, if that were possible, has been somewhat enlarged by new measurements made with the help of X-rays. The measurements were carried out by the physicist, Prof. Per Ohlin of the University of Uppsala, Sweden.

Previous measurements by this method gave results 0.3 per cent to 0.4 per cent smaller than those calculated from the atomic theory and other experimental data. The discrepancy was

due to the difficulty of determining just where the X-ray spectrum ends on the short wave side, which is the principal observation required by this method. This is as difficult as, or more difficult than, determining precisely where the edge of a rainbow is, especially on the blue side. A more precise way of determining this limit removed the difficulty and gave results in satisfactory agreement with those calculated from the atomic theory.

The quantity determined by this method is not directly the smallest quantum, Planck's radiation constant as it is more familiarly known to the physicist, but its ratio to the smallest electric charge, h/e . Professor Ohlin's final result for the ratio is 1.3787 divided by 10^{17} (1 followed by 17 zeros) which is the same, within the limits of experimental error, as that derived from the atomic theory. Since the smallest charge, e , is known, h is readily found.

To find the precise point where the X-ray spectrum fades to nothing, the method had been to use a narrow band of the spectrum near the end and measure its increasing intensity as the voltage was raised. A curve of these intensities was then plotted, and the curve was extrapolated downward, continued by the eye, to the level of zero intensity. This should have given the voltage at which that particular band of X-ray frequencies began to be emitted, but it did not quite.

Professor Ohlin, by using a much narrower band and changing the voltage by very small steps (2 volts), which was made possible by the use of a more powerful and efficient X-ray apparatus, found an irregularity at the lower end of the curve quite undisclosed by the previous coarser measurements. This accounted for the failure to get a result in agreement with that derived from the atomic theory, which result is thus confirmed and may be taken to be correct together with the theory and measurements on which it is based.

Bibliography. Among the new books on physics issued in 1943 were: R. A. Bagnold, *Physics of Blown Sand & Desert Dunes* (Morrow); O. H. Blackwood, *General Physics* (Wiley); E. E. Burns, *Physics* (Van Nostrand); N. D. Cheronis, *Study of the Physical World* (Houghton); J. A. Clark, *Physics of Today* (Houghton); H. Dingle, *Subatomic Physics* (Ronald); H. Dingle, *Mechanical Physics* (Ronald); George Eby, *The Physical Sciences* (Ginn); E. Hausman and E. P. Slack, *Physics* (Van Nostrand); L. G. Hector and H. S. Lein, *Electronic Physics* (Blakiston); C. A. Heiland, *Geophysics in War* (Colorado School of Mines); Sir James Jeans, *Physics and Philosophy* (Macmillan); E. J. Knapp, *Basic Physics for Pilots & Flight Crews* (Prentice-Hall); H. B. Lemon and M. Ference, *Analytical Experimental Physics* (University of Chicago); R. B. Lindsay, *Student's Handbook of Elementary Physics* (Dryden); O. Lühr, *Physics Tells Why* (Cattel); H. Margenau and G. M. Murphy, *Mathematics of Physics and Chemistry* (Van Nostrand); R. D. Rusk, *Forward with Science* (Knopf); F. Seitz, *Physics of Metals* (McGraw); Hugh H. Skilling, *Fundamentals of Electric Waves* (Wiley); S. A. Small and V. D. Collins, *Simplified Physics* (Dutton); O. Stuhlman, *Introduction to Biophysics* (Wiley); F. L. Verwiebe, *Elements of Machines* (Van Nostrand); M. W. White, *Practical Physics* (McGraw); Archie G. Worthing and Joseph Geffner, *Treatment of Experimental Data* (Wiley); Mark W. Zemansky, *Heat and Thermodynamics* (McGraw); H. Hirst, *X-Rays in Research and Industry* (Chemical); Royce Gerald Kioeffler, *Principles of Electronics* (Wiley); Frederick L. Coonan, *Principles of Physical Metallurgy* (Harper); Arthur T. Bawden, *Man's Physical Universe: A Survey of Physical Science for Colleges* (Macmillan); Robert H. Carleton, *Vitalized Physics in Graphiccolor* (College Entrance Book Co.); Brainerd, Koehler, Reich, and Woodruff, *Ultra-High-Frequency Techniques* (Univ. of Illinois); Schulz and Anderson, *Experiments in Electronics and Communication Engineering* (Harper); Tullen, Porter, and Houston, *Prepare Yourself: Physics Experiments With Practical Applications* (Scott); Robert I. Sarbacher and William A. Edson, *Hyper and Ultrahigh Frequency Engineering* (Wiley).

The following books were issued primarily to serve as texts for the pre-induction training courses: Morton Mott-

Smith, *A Course in the Fundamentals of Electricity* (Westinghouse Elec. & Mfg. Co. and Science Service); Lester R. Willard, *Fundamentals of Electricity* (Ginn); McDougal, Ranson, and Dunlap, *Fundamentals of Electricity* (Amer. Tech. Soc.); Dull and Idelson, *Fundamentals of Electricity* (Holt); Fred R. Miller, *Fundamentals of Electricity* (Heath); Johnson and Newkirk, *Fundamentals of Electricity* (Macmillan); Charles A. Rinde, *Electricity* (Harcourt, Brace); Beauchamp and Mayfield, *Basic Electricity* (Scott, Foresman and Co.); Feirer and Williams, *Basic Electricity* (Manual Arts Press); Hobbs, Morrison, and Kuns, *Fundamentals of Machines* (Amer. Tech. Soc.); Dull and Newlin, *Fundamentals of Machines* (Holt); Clark, Gorton, Sears, and Crotty, *Fundamentals of Machines* (Houghton, Mifflin).

WATSON DAVIS.

PICKETING. See LAW under *Decisions Concerning Personal Liberties*.

PIPELINES. See AQUEDUCTS; ELECTRICAL INDUSTRIES; PETROLEUM ADMINISTRATION FOR WAR.

PITCAIRN ISLAND. An island in the South Pacific, approximately midway between South America and Australia. Area, 2 square miles. Population (June 30, 1941), 193. The island was originally settled in 1790 by mutineers from H.M.S. *Bounty* and native men and women from Tahiti. In 1902 the islands of Ducie, Henderson, and Oeno were annexed by Great Britain and are now included in the district of Pitcairn. The agricultural products are yams, taro, maize, sweet potatoes, bananas, pumpkins, oranges, melons, pineapples, arrowroot, sugar, and coffee. The Government is administered by an annually elected council of 5 members headed by a chief magistrate subject to the control of the British High Commissioner for the Western Pacific. Chief Magistrate, F. M. Christian.

PLACEMENT, Bureau of. See WAR MANPOWER COMMISSION.

PLAGUE CONTROL. See PUBLIC HEALTH SERVICE; also MEDICINE.

PLANNING AND STATISTICS, Bureau of. See WAR PRODUCTION BOARD.

PLANT INDUSTRY, SOILS, AND AGRICULTURAL ENGINEERING, Bureau of. An agency of the U.S. Department of Agriculture, created as the Bureau of Plant Industry in 1902. It absorbed in February, 1943, the engineering research of the Bureau of Agricultural Chemistry and Engineering. Activities include investigations of plant production and improvement of soils and the engineering problems concerned with crop production and handling of soils.

PLANTS, PLANT DISEASES. See agricultural topics; INSECT PESTS.

PLASTICS. Statistics are of course withheld, but it is safe to assume that 1943 was a year of record production in the United States. The problem of securing sufficient raw materials even to meet vital military needs continued paramount. There were shortages of phenols, cresols, cresylic acid, and furfural, for the tar-acid resins; of benzene for polystyrene; of nitric acid for nitrocellulose; and of phenol and cresol for plasticizers.

Two new methyl methacrylate plants were opened during the year for more, and still more, transparent plane enclosures: one for Röhm and Haas Plexiglas at Knoxville, Tenn., and the other for duPont Lucite in Massachusetts. (See 1943 YEAR BOOK, p. 552.)

New Plastics. In vast array new plastics came upon the scene in 1943, under the urge for substitutions for strategic materials. They will be summarized alphabetically.

Amercote #33 is a liquid thermoplastic coating which may be cold-applied to storage tanks to protect foods from contamination by corrosion, and to protect machinery in chemical plants. Resistoflex Corp. has prepared a series called *Compar*, chemically compounded polyvinyl alcohol resin, up to twenty times more wear-resistant than natural rubber, and notably solvent-proof for handling aviation fuels. Snow-white *casein* plastics can at last be achieved, by removing the vitamin, riboflavin; heretofore only the colored variety was economically feasible.

Ethyl cellulose is being made into a new coating for insulating wires or airplanes exposed to sub-zero stratosphere temperatures; it withstands temperatures as high as 80° C. A thermosetting *lignin* plastic from corn stalks, wheat straw, and other farm waste has been developed by the Department of Agriculture. A heat-resistant *Lucite* molding powder, which withstands the temperature of boiling water, was announced by duPont as a war development; known as *H-M-119*, the plastic will fit a variety of military needs in airport and railroad signal-light lenses, reflectors, and other lenses exposed to temperatures in which ordinary plastics soften. A substitute mica, *Prolectron*, has been produced by General Aniline and Film Corporation.

A number of companies are making a plastic for propeller-shaft bearings replacing rubber, bronze, and Babbitt bearing materials in submarine chasers and other light vessels. *Micarta*, as it is called, wears longer and causes less friction than other bearing materials which it will probably permanently replace; also, it is unaffected by seawater, so that naval vessels may stay in action longer without dry-docking for bearing repairs. *Soybean proteins* are binding laminated kraft paper into plastic sheets for aircraft industries, to augment the limited supply of phenolic resin formerly employed. Water-proofed laminated board is achieved by placing single sheets of water-proof phenolic resin on the top and bottom of the stack of soybean sheets before pressing. The Army has purchased from Ecuador nearly 3,000,000 "vegetable ivory" buttons made from *tagua nuts*.

Thermo-Cast, a new thermoplastic ethyl cellulose, can be melted and cast into accurate shapes, without the use of pressure, forming the blocks, dies, and jigs upon which the metal parts of airplanes are fabricated. *Tygon*, a flexible plastic which can be shaped in regular rubber molds, is claimed to be unusually inert to the action of soaps, oils, and water, and hence is suitable for fashioning into fountain syringes, bath mats, ice bags, etc. The *tannin* compounds in redwood pulp can be converted by a process developed at the Institute of Paper Chemistry, into both thermosetting and thermoplastic products, for objects such as automobile steering wheels and molded bottle-closures. The Easton Regional Research Laboratory has prepared a *starch-acetate* adhesive and lacquer by treating potato starch with acetic and sulfuric acids; or by pre-swelling the starch grains in formic acid and then treating with acetic acid.

New Processes. "Flexible pressure" has been introduced for forming curved shapes, such as plane fuselages and boat holds of pressure-cooked plywood. In molding these forms, an inflated bag may exert pressure, pushing the plywood into the contours of the mold; in this position the adhesive is "pressure cooked" so that the plywood retains its shape permanently. The rubber molding bag can be used some fifty times. Mehar of the Bake-

lite Corporation described *heatronic molding*, the use of diathermic waves to harden thermosetting objects. The advantage of this treatment, only lately applied to nonconductors, is a uniform heating not achieved by the old method of applying heat from a hot die.

New Uses. The H. & H. Selmar Company are producing transparent phonograph records from a plastic surface on a glass base. Four hundred pounds of weight is saved in a single 50-ton flying boat by the use of a new type of flooring made up of laminated sheets of phenolic plastic, reinforced with strips of aluminum alloy. DuPont has produced lithographic printing plates from polyvinyl alcohol resin for printing colored army maps in mobile field presses. The discovery came through the use of the plastic as a coating on zinc to improve the printing quality of the metal, where it became apparent that the actual printing was from the plastic and not the metal. The printed image is formed from a light-sensitive coating of ammonium bichromate, the same as with a metal plate. Methyl methacrylate resins find outlet not alone in bomber noses but as insulators in electroplating baths, contact lenses worn next to the eyeball for correcting defective vision, insulators in high frequency radio equipment, unbreakable waterproof watch crystals, ear stoppers to eliminate the hazards of loud noises, deep-sea divers' helmets, and so forth. A New Orleans oculist has developed an artificial "Lucite" eye which moves in unison with its good mate. The electrical and mechanical properties of cellulose acetate "Plastacele" are put to advantage in a new air induction coil. Cellulose nitrate "Pyralin" is fashioned into hammer heads for sheet metal work in aircraft factories. For the molded bodies of military helicopters, duPont developed Adhesive #4624, a thermoplastic and thermosetting glue which is not affected by scorching tropical sun.

See **CHEMICAL INDUSTRIES**; **CHEMISTRY** under *Nylon*; **ELECTRICAL INDUSTRIES**; **MACHINE BUILDING**; **NATIONAL BUREAU OF STANDARDS**; **WAR PRODUCTION BOARD** under *Substitution*. For plastic bonded woods, see **MACHINE BUILDING**.

HUBERT N. ALYEA.

PLATINUM. Platinum and its by-metals—iridium, ruthenium, rhodium, osmium, and palladium—which normally are of importance primarily to jewelry manufacturers have become important war metals. Platinum stands at the head of the War Production Board list of all metals essential to the war in order of scarcity.

Platinum's great military importance is derived from its use by the electronics industry, which has extremely large requirements for contact points for radio and radar, and from added needs for catalysts and spinarets for synthetic fibers. The use of platinum in jewelry is forbidden by the WPB. Supplies have been shrinking, while production, which normally comes from Canada, Alaska, and Colombia placers, in that order, and from the Transvaal hard rock mines, has not kept pace. Russia is popularly supposed to produce 100,000 oz. per year from placers in the Urals, but wartime data on this production is not available.

Osmium and iridium occur as a natural alloy (osmiridium) and are separated at the refinery by a complex chemical operation. South Africa normally is the principal source, with some from Alaska and Colombia, and the principal peace time use is jewelry. Iridium now is under complete allocation through WPB order M-49, and consumption is limited to contact points, it is understood. Un-

der WPB order M-302, osmium may only be used for implements of war. Placing of iridium under allocation had the effect of pushing consumers into a more complete substitution of ruthenium for contact points, materially easing the iridium scarcity, but iridium is still available for a substantial portion of total magneto contact requirements. Use of ruthenium in jewelry manufacture, still permitted, is controlled in effect through the WPB order limiting the use of palladium in jewelry manufacture. This results from the fact that palladium normally is alloyed with ruthenium by the jewelry producers.

The rhodium supply position eased materially during 1943, and it is hoped by the War Production Board that some platinum may be saved by using a higher percentage of rhodium in the gauzes used in nitric acid manufacture. Use of rhodium in jewelry is forbidden. Palladium is in easy supply for war uses, and it is hoped to substitute it for platinum in the manufacture of contacts.

CHARLES T. POST.

PLOESTI RAID. See **RUMANIA** under *History*; **WORLD WAR**; photograph under **AERONAUTICS**.

PNEUMONIA. See **MEDICINE**.

POETRY. See **LITERATURE, AMERICAN AND BRITISH**; articles on foreign literatures.

POISON GAS. See **CHINA** under *History*.

POLAND. A central European republic, established Nov. 9, 1918. It was invaded by Germany Sept. 1, 1939, partitioned between Germany and the Union of Soviet Socialist Republics by the treaty of Sept. 28, 1939, and completely occupied by German forces after the outbreak of the Russo-German War on June 22, 1941. For a description of Poland prior to its partition, see 1939 **YEAR BOOK**, p. 625 f.

The Partition. At the outbreak of the war with Germany, Poland had an area of 150,470 square miles and a population of 35,500,000, according to official Polish statistics. By the German-Russian treaty of Sept. 28, 1939, Germany occupied the western sector of some 72,667 square miles with about 23,000,000 inhabitants, predominantly Polish, and Russia the eastern sector of 77,700 square miles with approximately 12,500,000 inhabitants, mostly Ukrainians and White Russians. See map in 1939 **YEAR BOOK**, p. 626.

German-Annexed Territory. By the decree of Oct. 8, 1939, Germany annexed as an integral part of the Reich about 35,512 square miles of territory in Western Poland with a population estimated in December, 1939, at 10,043,000. More than 9,000,000 of the inhabitants were Poles and about 600,000 Germans. The Poles were subjected to a ruthless Germanizing process. By May, 1941, it was estimated that between 1,500,000 and 2,000,000 Poles had been deported from the annexed territory eastward to the so-called Government General of Poland, while another 1,000,000 had been conscripted for labor service in Germany proper. Meanwhile German-speaking populations were transferred to the annexed territory from the Government General and from all of Eastern Europe—the Baltic States, Soviet-controlled Poland, the U.S.S.R. proper, Rumania, and Bulgaria—to occupy the lands and other properties taken from Poles. By March, 1941, some 490,000 repatriated Germans had been settled there. There was also an influx of Germans from Germany proper.

The Government General. Of the remaining German-occupied territory, an area of 225 square miles with some 45,000 inhabitants was transferred to

Slovakia on Oct. 21, 1939. The rest—an estimated 36,930 square miles with a population estimated at 12,912,000 in June, 1940—was organized as a separate German-controlled territory known as the Government General of Poland, with its capital at Cracow.

The Government General was constituted Oct. 25, 1939, under Hitler's decree of October 12 appointing Dr. Hans Frank, Reich Commissioner of Justice, as Governor General. While administered and controlled by the Germans, it was not a part of Germany. It remained outside the German customs area, although organized as an economic adjunct of the Reich.

The population of the Government General was subsequently increased by the wholesale deportation of Poles from German-annexed territory, and by the Nazi policy of using it as a "dumping ground" for Jews and other rebellious elements in Germany and the German-controlled regions of Europe.

Following the German attack upon Russia beginning June 22, 1941, all of Soviet-occupied Poland passed under German control. The Government General was then expanded to include the Polish Ukraine. This increased its area to an estimated 77,444 square miles and the population to about 19,807,000. There remained 84,000 square miles of Soviet-occupied Polish territory with a 1939 population of about 4,800,000. This region was lumped with the Baltic States and German-occupied parts of Russia proper to form the Ostland Province, under German military occupation.

Government-in-Exile. The German invasion beginning Sept. 1, 1939, and the Russian invasion beginning Sept. 17, 1939, forced the Polish Government to leave Poland on September 18. The Government-in-Exile established a temporary capital in Paris on Sept. 30, 1939. That same day President Moscicki resigned and appointed Wladyslaw Raczkiewicz as his successor. The latter named Gen. Wladyslaw Sikorski as Premier of a non-party Cabinet. On Nov. 22, 1939, the Government moved to a site near Angers, France. That same month the Polish Parliament was dissolved by Presidential decree. On Dec. 19, 1939, another decree authorized the appointment of a National Council of 24 members to serve in an advisory capacity to the Government. The National Council convened in Paris Jan. 23, 1940 (see YEAR BOOK for 1940, p. 603, for membership). On the eve of the French capitulation to Germany, the Polish Government and State Council moved to London (June 20, 1940). The National Council was dissolved Sept. 3, 1941, and a new one composed of 32 members was appointed Feb. 3, 1942. It comprised five representatives of each of the four main Polish political parties, two Jewish representatives, and 10 representing other sections of public opinion.

Premier Sikorski signed military conventions with Great Britain on Aug. 5, 1940, and with Canada on Apr. 5, 1941, providing for the raising and training of Polish armed forces on British and Canadian territory. In April, 1941, the U.S. Lend-Lease Act was extended to include the Polish Government-in-Exile. After the German attack upon Russia, the Polish Government-in-Exile terminated its state of war with the Soviet Union and concluded agreements with Moscow on July 30, Aug. 14, and Dec. 4, 1941, for the resumption of diplomatic relations, the annulment of the German-Soviet treaties partitioning Poland, the raising of a Polish army in Russia, and for friendship and mutual assistance (see 1942 YEAR BOOK).

Members of the Cabinet at the beginning of 1943 were: Premier and Commander-in-Chief of the Polish Armed Forces, General Sikorski; Vice Premier and Minister of Interior, S. Mikolajczyk; Acting Minister of Foreign Affairs, Count E. Raczynski; Information, Prof. S. Stronski; Labor and Social Welfare, Jan Stanczyk; Finance, H. Strasburger; Education, Gen. J. Haller; Justice, W. Komarnicki; Industry, Trade, and Shipping, Jan Kwapinski; War, Lieut. Gen. Marian Kukiel; Preparatory Work for Peace Conference, Marian Seyda; Minister of State, K. Popiel; Ambassador to the U.S.S.R., S. Kot. For developments in 1943, see below.

HISTORY

Polish-Russian Quarrel. Polish-Russian relations worsened steadily throughout 1943 over the issue of the Polish-Russian boundary, which had already become acute during 1942 (see 1943 YEAR BOOK, p. 555). Russia broke off diplomatic relations with the Polish Government-in-Exile on April 26. Thereafter Moscow followed a policy aiming at the replacement of the existing Polish Government by a pro-Soviet Polish regime, which would recognize Russian possession of the Polish territory annexed under the German-Russian treaty of Sept. 28, 1939. (This territory, inhabited mainly by Ukrainians and White Russians, had been in Russian possession from the end of the 18th century until 1919.) In view of the anti-Communist sentiments of the Polish people, the Anglo-Polish alliance, and the recognition of the Polish Government-in-Exile by the United States and the other United Nations, the Russo-Polish split posed a serious threat to wartime unity and postwar collaboration among the Allied powers.

The seriousness of Polish difficulties with Moscow were indicated by developments early in 1943. On February 21 Premier Sikorski, who had incurred the enmity of Polish reactionaries by his efforts to reach an amicable settlement with Premier Stalin, disclosed that his Government had protested to Moscow against "foreign elements intervening in the internal affairs of the Polish state." He said the Russians had been dropping parachutists in Central and Eastern Poland to organize Communist cells and direct political warfare; that there had been "spontaneous incidents" between Polish underground factions supporting Moscow and the Polish Government-in-Exile respectively; and that "the secret Russian radio in Poland—the Kosciuszko station—is always appealing to Poles for a general uprising and demanding that I issue orders to that effect." General Sikorski said he could not give such an order as it would risk "drowning my nation in a sea of blood."

It was announced February 23 that Premier Sikorski had postponed a scheduled trip to Moscow pending the outcome of "very delicate" negotiations with the Russians. These negotiations involved the status of an estimated 1,300,000 persons removed from Eastern Poland to Siberia and other parts of the Soviet Union following the Russian occupation and annexation of that region. The Poles insisted that the evacuees were Polish citizens and offered to provide funds for their relief, while the Russians claimed that they had acquired Russian citizenship.

These negotiations soon broke down. The Polish Government on February 25 published a resolution affirming Poland's right to the frontier existing Sept. 1, 1939, when the German invasion of Poland began. Tass, the official Soviet news agency, replied on March 2 in a Moscow broadcast accus-

ing the Polish Government of "imperialistic tendencies" in denying "the right of the Ukrainian and White Russian peoples to unite with their blood brothers" in Russia. On March 8 a pro-Soviet group of Poles in Moscow commenced publication of a weekly newspaper, *Wolna Polska* (*Free Poland*), which vigorously denounced the Polish Government in London and Polish nationalist and anti-Communist emigrés in Britain and the United States. It called for a "free, independent, and democratic Poland" without national or racial discrimination which would maintain "relations of good-neighborliness" with the Soviet Union and give up the Polish claim to the territory annexed by Russia.

Severance of Relations. These recriminations, plainly forecasting a parting of the ways between Moscow and the Polish Government, intensified the controversy over General Sikorski's Russian policy that had torn Polish governmental circles during 1941 and 1942. The Minister of Information, Professor Stronski, resigned on March 17, and it was reported that the anti-Russian faction was attempting to supplant Sikorski with Gen. Kazimierz Sosnkowski, a vigorous critic of the Sikorski-Stalin agreements of 1941 and 1942.

While still expressing a desire for a rapprochement with Russia, Premier Sikorski on March 30 called on the great powers to stand by their pledges to their smaller associates. He warned that if Poland's "rights" were not respected, "every Pole, irrespective of religious or political creed, will be united to the last man to resist any claims which aim at the sovereignty of our country." On April 17 the Polish National Council in London formally rejected the reasons given by the Soviet Government for the execution of the two Polish-Jewish labor leaders, Henryk Ehrlich and Victor Alter, in 1942 (see 1943 YEAR BOOK, p. 555).

At this point German propaganda intervened with a successful move to widen the breach between the Poles and the Russians. In mid-April the Germans announced the discovery of the bodies of 10,000 Polish officers who, they declared, had been slaughtered by the Russians near Smolensk prior to the occupation of that region by German armed forces. These officers were missing from among the Polish war prisoners taken by Russian forces in 1939. Accordingly the Polish Cabinet in London on April 18 instructed its representative in Switzerland to request the International Red Cross in Geneva to send a delegation to investigate the alleged massacre. This request was immediately denounced in Moscow as direct assistance to the Germans in fabricating a lie. Soviet spokesmen declared the Germans to be guilty of the massacre.

Despite British and American efforts to avert it, the severance of relations followed on April 26. The Soviet note declared the Polish Government had launched a hostile campaign against the Soviet Union "for the purpose of wresting from it territorial concessions at the expense of interests of the Soviet Ukraine, Soviet White Russia, and Soviet Lithuania." The Polish Government replied that it still desired a friendly understanding with Russia "on the basis of integrity and full sovereignty of the Polish Republic." It appealed "in the name of solidarity of the United Nations and elementary humanity" for the release of thousands of Poles whom it said were still held in the Soviet Union. According to a statement of the Polish Minister of Social Welfare on May 3, between 800,000 and 900,000 Poles were being held in Russia "against their own and their Government's will."

Stalin's Statement. The next significant develop-

ment came on May 5 when Premier Stalin, replying to questions addressed to him in writing by Ralph Parker, *The New York Times* correspondent in Moscow, stated that the Soviet Government desired "to see a strong and independent Poland after the defeat of Hitler's Germany." He added that postwar relations between the two countries should be based "upon the fundament of solid good neighborly relations and mutual respect or, should the Polish people so desire, upon the fundament of an alliance providing for mutual assistance against the Germans as the chief enemies of the Soviet Union and Poland."

Vishinsky's Charges. Hope that Stalin's letter might pave the way for a rapprochement between Moscow and the Polish Government was dashed on May 6. On that date Andrey V. Vishinsky, Soviet Vice Commissar of Foreign Affairs, issued to British and American correspondents in Moscow a lengthy statement listing numerous serious charges against the Polish Government and the armed forces under its command (for text, see *New York Times*, May 8, 1943). He charged Gen. Wladislas Anders, commander of the Polish forces organized in Russia under the Polish-Soviet military pact of 1941, with violating the agreement by refusing to send his troops to fight on the Russo-German front.

The statement said that in December, 1941, the Soviet Government agreed to regard persons of Polish nationality (blood), residing in the Russian-annexed territories of Eastern Poland, as Polish subjects. However, Vishinsky declared, the Poles assumed "a negative attitude" toward this offer, insisting that all residents of the annexed districts were Polish citizens. Consequently the Soviet Government on Jan. 16, 1943, withdrew the offer. Vishinsky also accused the Polish Government of using the funds and facilities placed at its disposal by the Soviet Government for the relief of refugees from German-occupied Poland to establish a network of spies and hostile propagandists on Soviet soil.

To this statement, the Polish Foreign Minister replied that the Polish troops in Russia had never received adequate or sufficient arms to permit them to fight; that the Soviet Government had suspended further recruiting of Poles in the spring of 1942; and that by reducing food rations for the Polish forces to enough for only 44,000 men, they had forced the evacuation of 30,000 Polish soldiers to the Middle East. He dismissed the Russian charges of espionage on behalf of Germany and "one of the Allied states" as fantastic and unfounded.

Pro-Soviet Poles Organized. Following Vishinsky's blast at the Polish Government-in-Exile, Soviet authorities took a series of steps that seemed designed to pave the way for the establishment of a pro-Soviet Polish regime in Moscow as a rival to the existing regime in London. On May 9 it was announced that the Russian Government had approved formation of a Polish division to join the Red Army in the fight against Germany. This division, named after the Polish hero Kosciuszko, went into action late in August. On November 12, 243 officers and men of the division were decorated for bravery in action by the Supreme Presidium of the Soviet Union. The division was commanded by Col. Zigmund Berling, former Chief of Staff of a Polish division under General Anders.

Meanwhile on May 12 a newly formed Union of Polish Patriots in the U.S.S.R. was organized in Moscow, with *Wolna Polska* as its official organ. The Union held its first assembly in Moscow in June. Meanwhile the Soviet Government had given it responsibility for the welfare and education of

all Poles in Russia. In a message to the leaders of the Union made public June 16, Stalin declared that the Soviet Union would do all in its power "to strengthen Polish-Soviet friendship and by every means possible aid the creation of a strong and independent Poland."

Death of Sikorski. British diplomacy strove unceasingly, with American support, to smooth the way for a restoration of Russo-Polish relations. But Moscow was unyielding and General Sikorski clung to the conditions for a resumption of relations set forth in his speech of May 4—release of families of Polish soldiers and of orphaned Polish children in the Soviet Union as soon as possible; release of Polish men fit to bear arms; and continuation of Polish relief work among Polish evacuees in Russia. The Polish Foreign Minister, Count Raczynski, announced on May 25 that the Polish Government would continue its efforts to organize a central European federation, to which Moscow had expressed strong opposition.

Dissension and unrest among the Polish armed forces of General Anders in the Middle East led Premier Sikorski to make a tour of Polish camps in that area in June and July. Polish officers were reported fearful lest British and American pressure force the Sikorski Government to yield to Soviet demands. There were reports of anti-Semitism and pro-Fascist tendencies among some of the officers and of resentment and discontent among the troops.

The Premier took steps to allay apprehension regarding his Russian policy and to eliminate other sources of dissension. En route to London from a six-weeks' trip, his plane crashed on July 4 soon after taking off from Gibraltar. Of the 16 persons on board only the Czech pilot survived. Killed along with General Sikorski were his daughter, his Chief of Staff, Gen. Tadeusz A. Klimecki, other leading Polish staff officers, and Col. Victor A. Cazalet and Brig. John P. Whiteley, both members of the British Parliament. The Premier's body was taken to England amid widespread regret at his death throughout the United Nations and buried at Newark, Nottinghamshire. Paying tribute to the departed leader in the House of Commons July 6, Prime Minister Churchill said the British Government was resolved to see that his work "shall not have been done in vain."

New Government Formed. The removal of Sikorski's strong and respected leadership provoked open dissension between rightist and leftist elements within the Polish Government over the appointment of a new Premier and military commander-in-chief. Government leaders agreed upon the appointment to the Premiership of the Deputy Premier under Sikorski, Stanislaw Mikolajczyk, son of a farm worker and leader of the powerful Polish Peasant party. Gen. Marjan Kukiel was continued in office as Minister of Defense. However President Raczkiewicz's insistence upon the appointment of General Sosnkowski as Deputy Premier and commander in chief of the armed forces precipitated a crisis.

Sosnkowski was a close associate and Minister of War under Marshal Josef Pilsudski, unofficial dictator of Poland until his death in 1935. His rightist affiliations made him unacceptable to the more democratic elements supporting the Government. However an agreement was finally reached on July 10 under which Sosnkowski was given command of the armed forces but the Vice Premiership went to the Socialist leader, Jan Kwapiński, along with the Ministry of Commerce.

Other members of the new Government announced July 14 were: Foreign Affairs, Tadeusz

Romer, who was Polish Ambassador to Moscow when relations were severed in April; Home Affairs, Wladyslaw Banaczynk (Peasant party); Justice, Prof. Wacław Komarnicki (Nationalist); Information, Stanislaw Kot (nonparty); Finance, Ludwig Grosfeld (Jewish Socialist); Labor, Jan. Stanczyk; Middle East, Hendryk Strassburger; Ministers of State, Marjan Seyda (Nationalist) in charge of preparations for the peace conference and Karol Popiel (Labor party) in charge of planning future administration; Education, Father Zygmunt Kaczynski.

In all, the new Government contained three members of the Peasant party, three Socialists, two Christian Democrats, two Nationalists, and three members without party affiliation. Members with liberal party affiliations predominated. Moreover Premier Mikolajczyk declared that his "government of national unity" was sincerely democratic and would be guided by the declaration of policy made by Premier Sikorski before the National Council on Feb. 25, 1942 (see 1943 YEAR BOOK). In an interview on July 16 the new Premier indicated that his Government would also adhere to the same policy as its predecessor with regard to Russian territorial claims and general relations with the Soviet Union. It was reported to have made several attempts to renew diplomatic relations with Russia on that basis, but with no success up to the end of 1943.

German Rule in Poland. Meanwhile the German authorities in occupied Poland intensified and extended their systematic program of exploitation, enslavement, deportation, and extermination, described in preceding YEAR BOOKS. In January Premier Sikorski reported that Governor General Hans Frank of the Polish Government General had instituted another wholesale roundup of Poles in an effort to crush the underground resistance movement and speed the process of national disintegration.

Gruesome reports of mass arrests and wholesale executions by the Gestapo and the German military forces reached London via underground routes from time to time. The Government-in-Exile announced on June 23 that 500 more Polish men and women had been shot and at least 2,000 others arrested in the preceding weeks. The Polish Minister of Home Affairs on July 26 estimated that 3,200,000 persons, including 1,800,000 Jews, had been slain by the Germans in one way or another up to May 1.

Reports of further atrocities led the U.S. and British Governments on August 29 to warn Germany once more that the "instigators and actual perpetrators" of crimes against civilians in occupied countries would be punished and their actions taken into account in the final settlement with Germany. The statement issued in Washington follows in part:

Trustworthy information has reached the United States regarding the crimes committed by the German invaders against the population of Poland. Since the autumn of 1942 a belt of territory extending from the Province of Bialystok southward along the line of the River Bug has been systematically emptied of its inhabitants. In July, 1943, these measures were extended to practically the whole of the Province of Lublin, where hundreds of thousands of persons have been deported from their homes or exterminated.

These measures are being carried out with the utmost brutality. Many of the victims are killed on the spot. The rest are segregated. Men from 14 to 50 are taken away to work for Germany.

Some children are killed on the spot, others are separated from their parents and either sent to Germany to be brought up as Germans or sold to German settlers or dispatched with the women and old men to concentration camps.

As before, these warnings had no effect whatever, except possibly to spur the Germans on to greater violence. From Polish and from official German sources came announcements of the wiping out of whole villages and of mass executions of thousands of Poles and Jews. The Jews, in particular, were singled out for systematic extermination. According to seemingly well authenticated reports, the 500,000 Jews in the Warsaw ghetto were virtually all slain after a heroic resistance against intermittent attacks by heavily armed German forces during the first half of 1943. The same fate was meted out to the inhabitants of ghettos in a number of other cities and towns. In some cases lethal gases were allegedly used for mass executions.

The Germans also stepped up their campaign to suppress the religious activities of the Polish Roman Catholic clergy. The organ of the Swiss Roman Catholic National Union stated on March 20 that of some 14,000 priests formerly officiating in Poland, more than 2,500 had been deported while the fate of 5,000 others could not be ascertained. Polish sources reported the continued slaughter of priests and that many others were confined in concentration camps.

Polish Resistance. Despite the growing ferocity of German repressive measures, the Polish underground maintained its organization intact and fought back with the weapons of assassination, sabotage, and terror. According to the Government-in-Exile, which organized and maintained close touch with the underground movement, Gestapo members and German government officials guilty of notorious cruelties were selected for assassination. The fatal shooting of Gen. Wilhelm Krueger, chief of the Gestapo in Poland, was reported by official Polish circles in London May 9, but this claim was denied by the Germans. On May 16 the Moscow radio announced the assassination of Kurt Hoffman, director of the Warsaw Labor Exchange. Many minor German officials and some Polish traitors and collaborators were said to have met the same fate.

See *CHEMISTRY under Foreign; GREAT BRITAIN under History; NAVAL PROGRESS; REFUGEES; WORLD WAR.*

RONALD STUART KAIN.

POLICE. See *FEDERAL BUREAU OF INVESTIGATION; JUVENILE DELINQUENCY. Compare PRISONS, PA-ROLE, and CRIME CONTROL.*

POLIOMYELITIS. See *MEDICINE; PHILANTHROPY under Warm Springs Foundation; PUBLIC HEALTH SERVICE; SANITATION; WATER SUPPLY.*

POLITICAL CAMPAIGNS. See *ELECTIONS IN THE UNITED STATES; UNITED STATES under Politics.*
POLITICAL DEFENSE, POLITICAL WARFARE. See *PAN AMERICANISM.*

POLITICAL ECONOMY. Subjects in the field of applied economics are treated in this volume under the following heads: *BANKS AND BANKING; BUSINESS REVIEW; CONSUMERS' COOPERATION; FINANCIAL REVIEW; LABOR CONDITIONS; SOCIALISM; SOCIAL SECURITY BOARD.* See also the article on *AGRICULTURE* and the various crops, industries, minerals, public utilities, etc. For books on the subject, see articles on literature.

POLLS. See *OPINION RESEARCH CENTER, NATIONAL.*
POLL TAX. See *STATE LEGISLATION under War and Postwar Legislation; also NEGROES; UNITED STATES.*

POLO. All tournament competition was canceled

and only a little informal polo was played in 1943. With the majority of players in some branch of the services or kept busy by the wartime "speed-up" courses at our polo-playing schools, even the colorful intercollegiate tourneys, so successful the previous year, went by the boards. So, for the duration, the indoor intercollegiate championship trophy will remain at Yale and the outdoor prize will stay at Princeton.

THOMAS V. HANEY.

PONAPE. The main island (158° 10' E. and 6° 45' N.) in the eastern Carolines of the Japanese Pacific Islands (q.v.). Total area, 145 square miles. Civil population (1938), about 11,468. There is a lagoon around the island formed by an outer reef. Jokai, a fortified islet, 876 feet high, in the lagoon provides the chief harbor landing. A naval establishment and large commercial docks have been constructed on the island which was reported to be a primary Japanese naval base. There is an agricultural experiment station. The chief exports are sugar, phosphates, bauxite, alcohol, copra, and dried fish.

PONDICHÉRY. See *FRENCH INDIA.*

PONTON (Pontoon) CONSTRUCTION. See *BRIDGES.*

PONY EDITIONS. See *MAGAZINES.*

POPULATIONS. See *UNITED STATES; articles on countries and States. For Population Movements, see IMMIGRATION; REFUGEES. Compare ALIENS.*

PORTABLE DARKROOMS. See *PHOTOGRAPHY.*

PORTAL-TO-PORTAL PAY. See *COAL; NATIONAL WAR LABOR BOARD.*

PORTO SANTO ISLAND. See *MADEIRA ISLAND.*

PORTS AND HARBORS. These two terms are complementary and to some extent interchangeable, but in general "port" has the broader application to both land works and water areas, while "harbor" is generally limited to the water areas of a port. Comparatively little new work or extension has been carried out in the United States during 1943. Most of the ports had facilities adequate even for the heavy export business incident to the war and its lend-lease factor. Such additions and improvements as were necessary for commercial, military, and naval activities were made quietly and quickly and without much publicity.

River and harbor improvements by the War Department (with jurisdiction over all navigable waters) were restricted to works of direct importance to the war efforts. Improvements and maintenance were carried out on 323 projects, of which six were completed. Typical works included harbor dredging at New York, Portland (Maine), and other ports; rock removal on the Delaware River channel from Philadelphia to the sea, and breakwaters at Los Angeles and Long Beach, California. Besides new works and maintenance of existing channels, improvements were effected on ports and waterways on the Atlantic, Gulf, and Pacific coasts, on the Great Lakes, and on a number of rivers. A notable work on the Great Lakes was the construction of the new MacArthur lock on the St. Mary's River at Sault Ste. Marie.

At one coastal port, new facilities provided on account of heavy lend-lease export traffic, included a wharf or quay 2,500 ft. long and 80 ft. wide, built of creosoted piles and timbers, with 40 ft. of water alongside and the deck 12 ft. above water level. This deck has a solid plank base carrying a 6-in. concrete roadway and trucking space 50 ft. wide, and bituminous paving along a double-track railway served by two classification yards having

some ten miles of track. The entire construction was completed in five months (a month ahead of schedule) by forces working two 10-hour shifts per day.

A new ore shipping dock at the head of Lake Michigan, at Escanaba, Mich., was built by the Chicago & Northwestern Railway (the cost defrayed by the U.S. Government). It is of timber construction, with a capacity of 96,000 tons of iron ore. Its purpose is to provide an alternative route for ore from the mines in the Lake Superior district in case of accident to the canal and locks at the "Soo," connecting lakes Superior and Michigan.

A vast program of dry-dock construction for ship repair work has been carried out by the Navy Department, 183 such docks having been built since 1940 at a cost of \$511,000,000. They include mobile types of floating dry-docks which can be towed or self-propelled at speeds sufficient to follow the fleet, and which vary in size from those for small craft to those capable of servicing the largest warships and troopships. There are also dry-docks composed of small pontoons that can be transported on ships and assembled at destination.

In fixed dry docks, or graving docks, new concrete designs have been developed. An outstanding feature of this dry-dock program is speed of construction by the Navy forces. For example, two huge dry-docks at the Navy Yard in New York were completed in 20 months, as compared with 8 years for an older dock only half the size. The new dry-dock at Pearl Harbor was also completed in 20 months (just before the Japanese attack on Dec. 7, 1941), while the first and smaller dock at that yard required 6 years.

In Mexico, the government plans port improvements costing \$3,150,000 at Puerto Mexico and Salina Cruz, the Gulf and Pacific terminals of the railway crossing the Isthmus of Tehuantepec. Improvements will be made also at Topolobampo on the Gulf of California.

Good progress has been made at Cape Town, Union of South Africa, on the new harbor works and the great dry-dock, 1,220 ft. long and 135 ft. wide, with 40 ft. of water on the gate sills. Plans are now being made for laying out the extensive area of new foreshore or made land formed by filling the space between the old shore line and the new docks. At Durban, South Africa, some \$4,000,000 are to be spent on harbor works, railway terminals, extension of the deep water areas, and additional facilities on Salisbury Island, in the bay. At Mombasa, East Africa, new ship berths, cargo handling machinery, and coaling facilities are to be provided. In Iran (Persia), American engineers and contractors and the U.S. Army have cooperated in building port facilities on the Persian Gulf for the use of American ships bringing war materials and supplies which are forwarded to Russia over roads also built by United States forces.

A new breakwater at Leixoes, Portugal, 3,300 ft. long, has its first 1,300 ft. formed by a concrete block pier, beyond which it consists of a heavy rock fill capped with 90-ton cubical concrete blocks 12 x 11 x 11 ft. These blocks were transported on a special barge having rolling platforms on the decks. At the site, the platforms were hauled forward by cables so as to dump the blocks over the bow of the barge. Postwar plans at Greenock, Scotland, include new dry-docks, commercial docks and piers, and revision of the railway terminal system. Similar plans for joint improvement of the opposite ports of Liverpool and Birkenhead, on the Mersey, England, provide for new roads and railway facilities, and the installation of machinery for the more

rapid and economical handling of freight. See COAST GUARD; TAXATION; WATERWAYS.

E. E. RUSSELL TRATMAN.

PORTUGAL. A republic of southwestern Europe. Capital, Lisbon.

Area and Population. The area is 35,490 square miles (continental, 34,254; Azores, 922; and Madeira, 314). The population at the census of Dec. 12, 1940, was 7,702,182 (continental, 7,223,421; Azores, 246,000; Madeira, 232,761), as against an estimated total of 7,760,965 on June 30, 1941. Live birth rate in 1942, 24.0 per 1,000 inhabitants (23.8 in 1941); death rate, 16.2 (17.4 in 1941). Emigrants in 1941 numbered 6,269, of whom 5,886 went to Brazil. Populations of the chief cities (1940 census): Lisbon, 686,416; Oporto, 267,122; Setubal, 51,037; Funchal (Madeira Is.), 34,487; Coimbra, 30,166; Braga, 29,658; Evora, 24,267. See AZORES, MADEIRA.

Colonial Empire. Portugal's colonial possessions comprise approximately 808,363 square miles of territory, with a population estimated at 9,405,000 in 1938. See separate articles on ANGOLA, CAPE VERDE ISLANDS, MACAO, MOZAMBIQUE, PORTUGUESE GUINEA, and TIMOR (occupied by Japan in 1942). The remaining colonial possessions are Portuguese India (capital, Nova Goa), with 601,000 inhabitants on an area of 1,538 square miles; and the islands of São Thomé and Príncipe (capital, São Thomé) off West Africa, with an area of 386 square miles and 59,000 inhabitants.

Defense. Military service is compulsory for men from 20 to 48 years of age. As of Jan. 1, 1941, the standing army totaled 30,868 and the air force 868. There were 155,000 trained reserves but little equipment for them. The navy consisted of 7 sloops, 6 destroyers, 7 gunboats, 3 submarines, and a dozen auxiliary vessels. The naval personnel on Jan. 1, 1941, included 719 officers and 5,860 other ranks.

Education and Religion. Education is nominally compulsory. The census of 1930 indicated that 67.8 per cent of the population were illiterate. Efforts to spread elementary instruction were thereafter intensified. In 1939-40 there were 545,867 elementary pupils receiving instruction from 13,416 teachers, 17,471 pupils and 1,022 teachers in 42 secondary schools, and three standard universities and one technical university with a total of 6,925 students. There is freedom of worship, but the Roman Catholic faith prevails. A Concordat signed by the Government and the Vatican May 7, 1940, granted the Church specific privileges (see 1941 YEAR BOOK, p. 619).

Production. Agriculture is the leading occupation, followed by forestry, fishing, mining, and manufacturing. The 1933 constitution provided for Portugal's economic reorganization along corporative lines. In 1941 over 70 per cent of all exports were subject to state (corporative) control. Estimated yields of the principal crops in 1943, with 1942 figures in parentheses, were: Wheat, 330,000 metric tons (495,000); corn, 500,000,000 liters (450,000,000); oats, 200,000,000 liters (215,000,000); rye, 110,000,000 liters (175,000,000); barley, 80,000,000 liters (95,000,000); rice, 75,000 metric tons (88,700); olive oil, 80,000,000 liters (38,000,000); almonds, 8,000 metric tons in 1942. Wine production was 5,186,645 hectoliters in 1940; wool, 5,004 metric tons in 1941; meat, 66,600 metric tons in 1940. Livestock in 1940 (including the islands): 973,226 cattle, 3,948,320 sheep, 85,040 horses, 122,832 mules, 245,448 asses, 1,252,975 swine, and 1,243,890 goats. The fishing industry in 1941

employed 36,837 men and boys, with 13,630 boats of 66,680 tons; in 1940, the sardine catch was 98,211 metric tons. Mineral production was (metric tons): Coal, 444,000 in 1942; cupriferous pyrites, 393,879 in 1940; copper, 173 in 1940; tungsten ore (tungsten trioxide content), 2,880 in 1942 (3,228 in 1941); kaolin, 2,701 in 1941; sulphur, 192,288 in 1940. The chief manufactures are textiles, shoes, cement, lime, glass, fertilizers, porcelain tiles, etc.

Foreign Trade. Merchandise imports in 1942 totaled approximately 2,449,200,000 escudos (2,468,400,000 in 1941); exports, 3,859,200,000 (2,972,400,000). Portugal's transit trade increased from 151,200,000 escudos in 1939 to 1,839,700,000 escudos in 1941. For the chief items of import and export in 1941, see 1943 YEAR BOOK. Portugal's direct trade is mainly with Great Britain, the United States, Germany, and the Portuguese colonies.

Finance. Budget estimates for the calendar year 1943 placed ordinary receipts at 2,302,425,124 escudos (2,132,944,824 in 1942) and the total of ordinary and extraordinary expenditures at 3,469,354,164 escudos (2,850,395,133 in 1942). Defense expenditures authorized for 1943 were 1,407,241,770 escudos, or 40.5 per cent of the total appropriations. Excluding bonds held by the Government and Government balances with banks, the public debt was 6,614,000,000 escudos on Jan. 1, 1942 (7,145,100,000 on Jan. 1, 1940). Average free market exchange rate of the escudo: \$0.03711 in 1940 and \$0.04 for the first half of 1941.

Transportation. There are 2,224 miles of railway lines, which in 1941 carried 25,470,324 passengers and 4,464,049 tons of freight. Highways and roads extended 15,215 miles in 1941. Eleven rivers are navigable for varying distances. As a result of its neutrality in World War II and strategic position, Portugal became one of Europe's most important shipping and air traffic centers. From the new £700,000 airport completed 18 miles from Lisbon in December, 1942, air lines radiated to North and South America, Africa, Great Britain, and the chief cities of continental Europe. The Portuguese merchant marine in 1941 comprised 790 vessels of 232,625 tons. An additional 54,000 tons of shipping was acquired in 1943 (German vessels interned in ports of Angola and Mozambique). A total of 5,976 ships of 7,646,070 tons entered Portuguese ports in 1941.

Government. Under the Constitution adopted Mar. 19, 1933, Portugal is governed as a corporative, one-party state. Voting is restricted to adult males who are able to read and write or who pay direct taxes to the state or administrative corporations, and to adult females having a special, secondary school, or university diploma. The Government party (Party of National Union), which is pledged to support the corporative state, was headed in 1943 by Dr. Antonio de Oliveira Salazar, Portugal's unofficial dictator. He was Premier, Minister of War, and Minister of Foreign Affairs of the nonpartisan military-civilian Cabinet formed after the 1926 military coup and reorganized in 1936 and 1940. The Constitution provides for a President elected for seven years by the voters, a National Assembly of 90 members similarly elected for four years, and a Corporative Chamber of 79 appointed representatives of the various branches of social and economic activity. The President appoints the Premier, who in turn names his Cabinet, which is not responsible to either the National Assembly or Corporative Chamber. For developments in 1943, see below.

HISTORY

Pro-Allied Trend. The trend toward a more openly pro-Allied nonbelligerency that took place in Portugal during 1942 (see 1943 YEAR BOOK) was accelerated in 1943. Speaking early in May on the 15th anniversary of the day he assumed charge of Portugal's finances, Premier Salazar said that the country's neutrality "was not unconditional, naturally, in view of the higher interests of the country and the English alliance, which, even in these dark and difficult times, we loyally affirm." Military censorship of all written and telephone communications to foreign countries was instituted July 15.

The tension that developed between Portugal and Japan in 1942 following Japanese occupation of Portuguese Timor was further aggravated in August when the Japanese flagrantly violated the neutrality of the Portuguese colony of Macao (q.v.). Early in September Chinese reports stated that Japan was demanding the installation of Japanese "advisers" in Macao under threat of military occupation.

Meanwhile the economic situation in Portugal had been deteriorating through the long-continued curtailment of overseas trade. Food riots and demonstrations were reported in some parts of the country. Toward the end of July industrial strikes by thousands of workers tied up shipyards, railways, and electrical power plants. The government was forced to threaten conscription of strikers for heavy labor duty in the Cape Verde Islands and to offer "iron rations" as an inducement to workers to return to their jobs. To overawe the strikers, 10,000 troops of the Lisbon garrison paraded through the streets of the capital on August 1, displaying new equipment.

Britain Gets Azores Bases. The foregoing circumstances, coupled with the steadily growing prospects of Allied victory over the Axis powers, led



Courtesy of The New York Times

British naval and air bases in the Azores, acquired on Oct. 12, 1943, facilitated Allied anti-submarine operations in the eastern Atlantic.

the British Government to approach the Portuguese Premier with an offer of increased shipments of arms, food, and other essential civilian supplies in return for the wartime use of bases in the Azores. As indicated by the accompanying map, the Azores

were ideally located to round out the network of Anglo-American bases established in the North Atlantic for the protection of convoys against German submarine depredations. The islands guarded the southern sea route between American and British ports and stood athwart the direct routes from the United States to the Mediterranean and from the Venezuelan oil fields to the British Isles. Their use would permit the U.S. Army and Navy air transport commands to operate direct services from American east coast ports to French North Africa instead of taking the roundabout route by way of the bulge of Brazil.

Premier Salazar proved receptive to this proposal. After careful preparations to minimize the danger of Axis reprisals against the Portuguese mainland, the conclusion of the agreement was announced simultaneously in London and Lisbon on October 12. According to the announcement made by Prime Minister Churchill before the House of Commons October 12, the agreement concerned "first, the conditions governing the use of the (Azores) facilities by His Majesty's Government in the United Kingdom and, secondly, British assistance in furnishing essential material and supplies for the Portuguese armed forces and for the maintenance of Portugal's national economy."

"The agreement concerning the use of facilities in the Azores," he continued, "is of a temporary nature only and in no way prejudices the maintenance of Portuguese sovereignty over Portuguese territory. All British forces will be withdrawn from the Azores at the end of hostilities."

Portugal Neutral on Mainland. Churchill emphasized that the new Anglo-Portuguese agreement was an application of the 600-year-old alliance first concluded between the two countries in 1373. "Nothing in this agreement," he said, "affects the continued desire of the Portuguese Government, with which His Majesty's Government have declared themselves in sympathy, to continue their policy of neutrality on the European mainland and thus to maintain a zone of peace in the Iberian Peninsula." Premier Salazar likewise announced his Government's determination to remain neutral on the European mainland.

Both the German and Japanese Governments lodged formal protests against the violation of neutrality involved in the grant of the Azores bases to the British. But neither carried its anger and chagrin to the point of breaking relations with Portugal. The reasons for this were that the Axis powers had nothing to gain from such action. Germany was buying tungsten and other vitally needed strategic materials from Portugal, which would be cut off in case the Germans sought to retaliate against the Portuguese. The Germans, like the British, needed a neutral base in the Iberian peninsula for espionage and other contacts with territories under hostile or neutral control. Finally, the Germans could not successfully attack Portugal without crossing neutral Spain and such a move threatened to throw both Spain and Portugal into the war on the side of the Allies. In addition, large Allied forces in Britain and North Africa were in a position to go to Portugal's assistance.

The Portuguese Government took major precautions against a German attack before announcing the Azores deal. The Portuguese armed forces, supplied with much new British equipment, began military maneuvers on the largest scale since World War I on October 11. The civil defense organizations in Lisbon and other cities were placed on the alert October 10, and the Portuguese Gov-

ernment issued a number of cryptic statements indicating that it was prepared to abandon neutrality "if dignity and the national interest require it." When the crisis was passed, the Portuguese War Ministry on November 2 ordered demobilization of the reserve units called into service for the October "maneuvers."

Application of Azores Pact. British naval and air forces landed in the Azores—which already had strong Portuguese garrisons—immediately after the conclusion of the Anglo-Portuguese agreement. They carried out extensive but unspecified engineering works, including the construction of a number of air fields and improvement of harbor facilities, to facilitate anti-submarine patrols. Within two weeks after British patrol planes began operating from Azores bases, a Coastal Command Flying Fortress reported the first sinking of a German submarine. United States forces also made use of the base facilities in the Azores.

It was announced in Lisbon October 16 that the British Government had delivered two corvettes to the Portuguese Navy, the first of a number of warships promised under the Azores agreement. Equipment for the ground and air forces was also forthcoming. Lisbon sources announced December 30 that Portugal had received 43,000 tons of wheat from the United States, Canada, and Argentina during the preceding month and that the British had made available a number of ships to assist in transporting it. The improvement in the food situation was followed on December 25 by a Government order freeing the several hundred political prisoners remaining in Portuguese jails. However it was stated that a number of prisoners charged with "social crimes" were still confined.

Other Developments. On November 26 Premier Salazar told the National Assembly that lengthy negotiations with the Japanese for the restoration of Portuguese sovereignty over Timor had made no progress and that the Government felt a solution was "absolutely necessary." An important commercial agreement was concluded by the Spanish and Portuguese Governments on February 22, replacing the agreement of May 21, 1941. It provided for the exchange by each party of goods and services valued at 235,000,000 escudos during 1943.

See AUSTRALIA, GREAT BRITAIN, and SPAIN under *History*; PORTS AND HARBORS.

PORTUGUESE EAST AFRICA. See MOZAMBIQUE.

PORTUGUESE GUINEA. A colony of Portugal situated on the west coast of Africa between French Guinea and Senegal. Area, 13,944 square miles. Population (1940 census), 351,089. Chief ports: Bolama, Bissau (capital), Cacheu, and Bubaque. The principal commercial products are rice, palm oil and kernels, groundnuts, and hides. Trade (1941): imports 49,261,000 escudos; exports 64,997,000 escudos (escudo averaged \$0.0400, 1941). Shipping (1941): 59 vessels aggregating 66,855 tons (net) cleared the ports. Roads (1941): 1,864 miles. Budget (1942): 35,544,848 escudos. A governor heads the administration of the colony.

PORTUGUESE INDIA. The possessions of Portugal in India, comprising Goa, Damán, and Diu. Total area, 1,537 square miles. Population (1940 estimate), 600,000. Capital, Panjim (Nova Goa). Chief products: manganese (3,300 metric tons, 1940), copra, spices, caju-nuts, fish, and salt. The trade is principally transit. Trade (1940): imports 104,933,000 escudos; exports 1,646,000 (escudo averaged \$0.0371 in 1940). There are some 51 miles

of railway and 730 miles of roads. Budget (1942): 46,487,822 escudos. Public debt, Jan. 1, 1942, 15,989,551 escudos. Governor General, Col. José R. P. Cabral.

PORTUGUESE TIMOR. See TIMOR, PORTUGUESE.

PORTUGUESE WEST AFRICA. Same as ANGOLA (q.v.).

POST OFFICE, U.S. The year 1943 was one of rapidly expanding mail volume, continued strain on postal personnel and facilities to meet the demands of wartime, and reorganization in the interest of postal efficiency and better business practices.

For the first time in twenty-four years, postal revenues exceeded expenditures; there was a surplus of \$1,334,551 for the fiscal year ended June 30, 1943. Revenues for the fiscal year increased to \$966,227,288, by far the largest total in history and \$106,409,797 larger than in the preceding year. Accrued expenditures were \$964,892,737. Total financial transactions, including such items as postal savings, war bond sales, money orders, revenues, and expenditures, rose to about fourteen billion dollars. Sales of war savings stamps and war bonds by the post offices for the year exceeded two billion dollars. Volume of mail rose some 10 per cent to more than 33,000,000,000 pieces, swelled by correspondence of the armed forces and of those who left their homes to take work in war industries. The service handled the gigantic task of distributing the third ration book, delivering about 120,000,000 copies, one for every civilian man, woman, and child in the United States.

The number of postal employees, including regularly working substitutes, workers under contract, and temporaries, was approximately 335,000, about the same as a year earlier. Included, however, were thousands of temporary wartime employees hired to take the places of those who left for the Army and Navy; returning members of the armed forces will find their jobs waiting for them. By the end of the calendar year 1943, about 32,000 postal workers had gone into the fighting forces. The number of post offices declined further to 42,680 at the end of the fiscal year, compared to 43,406 a year earlier. There were also 5,965 branch post offices and contract stations.

The Bureau of the First Assistant Postmaster General, in charge of post office operations and personnel, and the Third Assistant, in charge of postal finance, were thoroughly reorganized for more effective supervision of the vastly expanded mail and financial work. A detailed study of postal cost ascertainment and accounting, by specially employed accounting experts, was near completion at the end of 1943. The study will provide a sounder basis than ever before for controlling costs and determining the proper rates to be charged for each class of mail and special services.

See MAGAZINES.

POSTWAR ECONOMIC POLICY AND PLANNING, Committee on. See POSTWAR PLANNING.

POSTWAR PLANNING. The decisive military successes won by the United Nations during 1943, the collapse of U-boat attacks on shipping in the Atlantic, the destruction of German cities by bombing from the air, and the advances in the Southwestern Pacific, greatly intensified interest in postwar planning, both in the United States and among the other United Nations. At the same time, such planning tended to become more realistic as the difficulties and problems of the postwar transi-

tion came more clearly into view. The tendency to regard the postwar period as a bright-hued Utopia, in which political, economic, and social problems would resolve themselves automatically and mankind would attain unprecedentedly high living standards as a matter of course, gave way to efforts to study and surmount specific difficulties standing in the way of a return to normal conditions at the end of the war.

In the political domain, the progress of planning was marked by conferences held among the United Nations' leaders, culminating with the Moscow conference of foreign ministers in November and the meetings of Prime Minister Churchill, Generalissimo Chiang Kai-shek, Premier Josef Stalin, and President Franklin D. Roosevelt at Cairo and Teheran near the end of the year. (See UNITED NATIONS.) Passage in Congress of a resolution favoring a postwar organization to maintain peace offered the hope that postwar political plans would not be undermined this time, as they were after the first World War, by refusal of the U.S. Senate to approve a peace treaty that would involve American participation in an international political organism.

Far greater activity was manifest in the field of economic postwar planning. Both Government and private agencies, and individual business enterprises, formulated plans for the solution of postwar problems.

Government Planning. The most ambitious postwar plan formally submitted to Congress by any Government agency was that of the National Resources Planning Board, which was received by the legislature on Mar. 10, 1943. Part I of this report on a Postwar Plan and Program made specific proposals for military and economic demobilization after the war. For the longer run, the Board proposed that higher living standards be sought through curbing monopolies, the establishment of "mixed corporations" in which Government and private enterprises would cooperate where the Government already has large investments, and Government assistance to small business in solving its production, marketing, and financial problems. Detailed plans for urban development, land and forest use, development of water power resources, and modernization of transportation with Government assistance were presented, as well as for placing public works on a planned basis through the preparation of six-year capital budgets by Federal, State, and local governmental agencies.

A second report of the National Resources Planning Board on Security, Work, and Relief Policies covered expansion of social insurance and public assistance to the unemployed, health insurance, housing, and educational developments.

The proposals of the National Resources Planning Board were criticized as favoring unduly the expansion of Government activities at the expense of private industry. Congress, reflecting such criticisms, did not appropriate funds to continue the Board, and it ceased operation July 1, 1943. The Senate on Mar. 12, 1943, passed a resolution introduced by Senator George of Georgia to set up a Special Committee on Postwar Economic Policy and Planning, to assure Congress a leading part in the formulation of postwar economic policies. The Special Committee launched a series of studies of postwar problems, to be carried out by the Brookings Institution.

A number of Government departments and agencies prepared plans covering specific questions in their special fields. The armed forces

tackled the question of demobilization. President Roosevelt presented a series of proposals for cash allowances and retraining of men released from the military forces, which were part of the overall demobilization plan. The War Production Board prepared plans for reconversion of industry.

The U.S. Department of Commerce issued special studies on "Markets After the War" and "Foreign Trade After the War." The first predicted an unprecedented demand for automobiles, refrigerators, and other durable consumer goods, based on the huge accumulations of cash and war savings bonds in the hands of the people. The second pointed out that a high level of business activity within this country would stimulate our imports, so that foreigners would have, inclusive of sums received for services rendered Americans and foreign investments by this country, some \$10,000,000,000 of dollar exchange in a typical year, of which \$7,000,000,000 would be available for purchases of goods here. This would represent a larger export trade for the United States than was ever attained in the past in time of peace. Other Government agencies preparing specific plans were the Bureau of Labor Statistics, the War Manpower Commission, the Interstate Commerce Commission, the Maritime Commission, the Civil Aeronautics Authority, the Social Security Board, and the National Housing Agency. (See those articles; see also *Postwar Plans of the United Nations* by Lewis L. Lorwin.)

Near the end of the year, the absence of coordination in postwar economic planning within the Government, and the conflicting ambitions of several agencies to direct the difficult transition process, became apparent. The armed forces, the War Production Board and the Office of War Mobilization were in open conflict, in fact, over the direction of economic demobilization. To head off hasty and ill-considered legislation by Congress, Director of War Mobilization James F. Byrnes appointed Bernard M. Baruch as his special adviser on postwar problems. Mr. Baruch was expected to formulate a comprehensive plan to coordinate direction of the postwar transition, which would form a basis for enacting legislation, and to hasten decisions on contract termination policy, severance pay for war plant workers, disposal of surplus plants and inventories, and lifting of government controls. Shortly after the turn of the year, Mr. Baruch issued a Uniform Termination Article for war contracts, to assure contractors reimbursement for costs and a profit up to 6 per cent on cancelled contracts.

Private Planning. The Twentieth Century Fund in its second report on Postwar Planning in the United States, listed 137 agencies and groups, most of them private, as engaged in postwar planning in 1943. The most ambitious of the private efforts was that of the Committee for Economic Development, which had been set up with the cooperation of the Department of Commerce, but was financed entirely by private industry. This Committee undertook a comprehensive research program with a budget of \$5,000,000, its chief objective being to assure a high level of employment after the war. Apart from general economic studies, the Committee sought to organize business concerns in each community to plan for additional jobs, setting up a Field Development Committee for the purpose.

The National Association of Manufacturers through its Postwar Problems Committee urged greater reliance upon the recuperative powers of the national economy, once freed from restraints upon private enterprise. Stimulation of new investment through an overhauling of the tax system, through stabilized industrial relations and through the removal of Government restrictions on prices and production were urged. The National Association of Manufacturers also advanced a plan of its own to facilitate demobilization of the armed forces through cash allowances for persons honorably discharged. The Chamber of Commerce of the United States and individual trade associations also sought actively to stimulate realistic planning by individual concerns.

Postwar planning by business corporations was concerned mainly with the termination of war contracts, reconversion of plants, reemployment of returning members of the armed forces, designing products for postwar markets, planning distribution of goods in the postwar period, and the preparation of budgets for financing the postwar transition. Corporations like the General Electric Company were inclined to emphasize the development of new and improved products, while others like the General Motors Corporation were more concerned with plans for hastening reconversion of plants to a peacetime basis and the restoration of prewar efficiency standards in their organizations.

Foreign Postwar Planning. The planning for the postwar period was actively prosecuted both by Government and private agencies in Great Britain during 1943. A number of these plans dealt with the reconstruction of cities destroyed by bombing and with social security. The Beveridge Plan for social insurance was taken up formally in the

THE POSTWAR EMPLOYMENT PROBLEM IN THE UNITED STATES

	AGRICULTURE	PRIVATE NONAGRICULTURAL	PUBLIC		
DEC. 1940	9,009	33,596	2,995	1,193	47,677
DEC. 1943	8,900	36,300	3,000	3,500	10,800
					62,500 EST.

National Industrial Conference Board

STATE AND LOCAL ARMED FORCES
FEDERAL CIVILIAN

House of Commons in February, 1943, and the debate over it for a time threatened the life of the coalition Government. However, the issue was settled amicably by endorsement of the principles of the Plan by Prime Minister Churchill, without specific commitment as to when and how the proposals would actually be put into effect. Similarly, the Churchill Government refused to adopt proposals to set up a central planning authority, although in a speech before the House of Commons on Mar. 21, 1943, Mr. Churchill outlined a Four-Year Plan for Great Britain, embracing in principle an extension of social insurance, expansion of British agriculture to make the country more self-sufficient as regards food supplies, and fuller planning by the Government in partnership with private enterprise. The Prime Minister stated that the field of State ownership, especially in monopolistic industries, was expanding and that the modern State must "increasingly" concern itself with the well-being of the nation."

Private planning in Great Britain was concerned largely with foreign trade, shipping, and aviation development. Because of her far-flung empire, Britain is especially interested in adequate transportation facilities. Strong support was expressed for the development of a number of competing international air transport lines, some owned by steamship lines, to take the place of the Government monopoly of Imperial Airways, Ltd. before the war.

The other United Nations, particularly the governments-in-exile of Western European countries, conducted intensive postwar economic planning of their own, both individually and through joint committees of finance ministers and other officials. These nations sought to formulate their reconstruction needs, as a basis for appeals for aid from the United States as soon as their countries are free from German occupation. The United Nations Relief and Rehabilitation Administration was set up to provide a vehicle for joint international action to furnish relief to areas freed from the Axis yoke. Emphasis was placed on relief in the plans of this agency with very limited provisions for reconstruction.

It was generally recognized that China would offer a particularly promising field for economic development after the war, when the Japanese invader will have been defeated. Plans for Chinese economic development after the war contemplate Government ownership of armament and other heavy industries and transportation facilities, with consumer goods industries left in private hands. See AUSTRALIA, CHINA, GREAT BRITAIN, PALESTINE, UNION OF SOVIET SOCIALIST REPUBLICS under *History*.

International Planning. Progress was made during the year in laying plans for international agencies to foster postwar economic reconstruction. Most attention was paid to published proposals for international currency stabilization, formulated for Great Britain by Lord Keynes and for the United States by Harry D. White, monetary adviser to the United States Treasury. The British Keynes plan contemplates an International Clearing Union to enable individual countries to build up favorable or unfavorable balances of international payments without the necessity for gold shipments, up to specified limits. The settlement of accounts in the Clearing Union is to be made in terms of "Bancor." The American White plan provides for the organization of a formal International Monetary Stabilization Fund in which various countries would have participations, settlement of accounts to be made in terms of "Unitas." This fund is to

begin with at least \$5 billion of gold and foreign exchange resources. Under both plans, and especially the White plan, gold would retain a considerable role, since both "Bancor" and "Unitas" would bear a specific ratio to gold. The "Unitas" would have a fixed value of \$10 in gold, but under the revised White plan issued in July, this gold content could be changed by vote of 85 per cent of the Board of Directors. Because the Keynes plan was considered more favorable to debtor countries and the White plan to the creditor countries, they were the subject of considerable controversy on both sides of the Atlantic. Conferences held late in the fall between Lord Keynes and Mr. White failed to yield an agreement, but an international conference of representatives of 44 nations on these plans was projected for 1944.

The United States Treasury also published a plan for a United Nations Bank for Reconstruction and Development, to make long-term loans to nations and industries where private capital is not available for the purpose, and to help finance international commodity stabilization schemes. This institution was to have a capital of \$10,000,000,000, a third to be provided by the United States.

Both the monetary stabilization and the international capital bank plans were widely criticized in financial and industrial circles as being far too ambitious and experimental in character. Spokesmen for American banking urged instead an Anglo-American agreement to stabilize the dollar-pound relationship in the postwar period, as an indispensable first step towards the restoration of sound monetary conditions generally. Such an agreement, which it was felt could be reached readily, would provide a nucleus around which other currencies could be stabilized throughout the world. Bankers were also inclined to emphasize the need for each country creating conditions within itself, through proper economic and budgetary policies, to place its currency and credit on a strong basis, rather than to rely mainly upon help from abroad before putting internal affairs in order.

Postwar plans are discussed specifically in a number of topics in this volume, including the following: AERONAUTICS under *Postwar Air Policy*; AGRICULTURE under *Postwar Food Needs*; CONSTRUCTION INDUSTRY and the various engineering topics; EDUCATION; FIRE PROTECTION; INSURANCE; LIBRARY PROGRESS; PAN AMERICANISM; PRISONS; ROADS AND STREETS; STATE LEGISLATION under *War and Postwar*; PSYCHOLOGY under *Social*; SHIPPING; SOCIAL SECURITY BOARD; RUBBER; UNITED STATES. See articles on organizations, as LEAGUE OF NATIONS; PAN AMERICAN UNION; OPINION RESEARCH CENTER; PHILANTHROPY under *Foundation Activities*; SOCIETIES.

JULES I. BOGEN.

POTASH. See CHEMICAL INDUSTRIES; CHEMISTRY under *Chlorine and Fertilizers*.

POTATOES. The 1943 potato crop in the United States was estimated by the U.S. Department of Agriculture at 464,656,000 bu., a record yield, harvested from 3,322,000 acres averaging 139.9 bu. The comparable figures for 1942 were 370,489,000 bu., 2,705,500 acres and 136.9 bu. The average annual yield for the 1932-41 period was 363,332,000 bu., 3,131,200 acres and 116.9 bu. The 18 surplus late potato States produced 28,113,000 bu.; the 12 other late potato States made 35,430,000. The seven intermediate potato States totaled 34,774,000 bu., and the 12 early potato

States produced 66,339,000 bu. The seasonal average price per bu. (preliminary) received by farmers in late potato States \$135.3, in intermediate States \$140.9, in early potato States \$152.0, or a national average of 137.5¢ and an estimated production value of \$639,124,000 (1943), compared to 116.4¢ and \$431,245,000 (1942). The accompanying table lists the leading potato States for 1943.

State	Value	Acres Harvested	Production (bushels)
Maine.....	\$81,568,000	207,000	73,485,000
New York.....	47,485,000	209,000	29,678,000
Idaho.....	43,035,000	189,000	43,470,000
California.....	41,895,000	41,000	11,480,000
Michigan.....	35,784,000	213,000	22,365,000
Pennsylvania.....	33,394,000	176,000	18,656,000
Minnesota.....	27,107,000	243,000	23,571,000
North Dakota.....	24,973,000	170,000	22,100,000
Colorado.....	24,316,000	87,000	18,705,000
Wisconsin.....	22,915,000	186,000	16,368,000
Washington.....	20,460,000	60,000	13,200,000
New Jersey.....	16,689,000	71,000	11,431,000
North Carolina.....	16,576,000	109,000	12,099,000
Ohio.....	16,502,000	90,000	8,550,000
Nebraska.....	15,233,000	93,000	12,090,000
Oregon.....	15,192,000	53,000	10,335,000
Virginia.....	13,432,000	78,000	9,594,000
Texas.....	10,384,000	75,000	6,450,000
Iowa.....	8,119,000	54,000	5,238,000
Alabama.....	7,896,000	56,000	5,264,000
Indiana.....	7,790,000	41,000	4,100,000
Florida.....	7,295,000	30,600	3,703,000
Kentucky.....	6,903,000	53,000	4,663,000
Arkansas.....	6,386,000	59,000	4,661,000
Tennessee.....	6,263,000	60,000	4,380,000
Massachusetts.....	5,974,000	25,000	3,375,000
Connecticut.....	5,742,000	22,000	3,190,000
Louisiana.....	5,578,000	59,000	3,599,000
South Carolina.....	5,428,000	31,000	3,193,000
West Virginia.....	5,134,000	37,000	2,775,000

POULTRY. See LIVESTOCK.

POWDER METALLURGY. See CHEMISTRY under *Metals*.

POWER. See ELECTRIC LIGHT AND POWER, etc. For Mobile Power Plants, see ELECTRICAL INDUSTRIES.

POWER, Division of. A division of the U.S. Department of the Interior which coordinates the power phases of the various bureaus of the department, with particular reference to meeting the power requirements of the war program. For details see 1942 YEAR BOOK, p. 531. Acting Director: Arthur E. Goldschmidt.

PRA. See PUBLIC ROADS ADMINISTRATION.

PREEMPLOYMENT COURSES. See EDUCATION, U.S. OFFICE OF.

PREFABRICATION. See SHIPBUILDING.

PREFRONTAL LEUCOTOMY. See PSYCHIATRY.

PREMIUM PRICE PLAN. See COPPER; LEAD; ZINC.

PRE-PEARL HARBOR FATHERS. See SELECTIVE SERVICE SYSTEM; UNITED STATES under *Armed Forces*.

PRESBYTERIANS. A religious connection adhering to a system of church government by presbyters or elders and having some 60,000,000 members throughout the world. In the United States there are ten Presbyterian bodies, the largest of which follow. Also see RELIGIOUS ORGANIZATIONS.

Presbyterian Church in the United States of America. This is the largest body of the Presbyterian communion, being represented by churches in every State of the Union and having official mission stations in Alaska, Cuba, Puerto Rico, and 16 foreign lands. In 1943 its churches in the United States and abroad were organized into 40 synods and 271 presbyteries. Statistics for the year ended Mar. 31, 1943, showed a total communicant membership in full standing of 2,051,869, the largest number in the history of the Church. The known adherents

number approximately 3,000,000 additional. The Sunday school enrollment totaled 1,294,818. The number of churches was 8,628 and of ministers 9,434. Contributions during the year amounted to \$47,451,008, of which \$39,356,249 was for current expenses and \$8,094,759 for benevolences. From living givers the Board of National Missions received \$2,556,132; the Board of Foreign Missions, \$2,240,850; the Board of Christian Education, \$615,599; and the Board of Pensions, \$171,931. In addition the Church raised \$1,102,000 for war emergency causes. The Church maintains 53 colleges and 10 theological seminaries. It publishes three national official periodicals, *Monday Morning, Everyone,* and *Women and Missions*.

The 155th annual General Assembly was held at Detroit, Mich., May 27 to June 1, 1943. The Rev. Dr. Henry Sloane Coffin, president of Union Theological Seminary, New York, was elected Moderator. The Assembly recommended for "thorough study and appropriate action" the six "Pillars of Peace" prepared by the Commission to Study the Bases for a Just and Durable Peace, and approved a report prepared after a year of study by the Church's own Special Committee on a Righteous Peace and containing nineteen basic principles. The General Assembly also celebrated during 1943 the Tercentenary of the 1643 convening of the Westminster Assembly of Divines in Westminster Abbey, London; established a new National Committee on Evangelism; adopted a thoroughgoing revision of the Church's system of education of its ministry, involving still higher standards than the already high standards of the past; and issued a lengthy pronouncement in the social realm, including labor and management, rural life, gambling, child welfare, anti-Semitism, and other problems. The Church has its headquarters in the Witherspoon Building, Philadelphia, Pa., in charge of the Rev. Dr. William Barrow Pugh, Stated Clerk.

Presbyterian Church in the United States (South). This division of the Presbyterian denomination covers the territory commonly known as the Southern States. It was composed in 1943 of 17 synods (in most cases, corresponding to State lines) and 88 presbyteries, with 3,502 organized churches, 2,542 ministers, and 553,797 members. During the year 16,705 were received on profession of faith, and 24,072 by certificate. There were 9,973 adult baptisms and 7,973 infant baptisms. The Ruling Elders numbered 18,292, and deacons 21,226. Contributions for current expenses during the year amounted to \$4,317,344; for pastors' salaries \$3,355,611; for building expense \$2,321,334; and for benevolences \$4,178,159; a grand total of \$14,172,448. The total per capita gift was \$25.59, of which \$7.54 was for benevolences and \$18.05 for current expenses.

Foreign Mission Work has been carried on in six countries: Africa, Brazil, China, Japan, Korea, and Mexico, among 36,000,000 people; 337 American Missionaries have constituted the working force. Work in the Orient has been disrupted by the war. Occupied China contains practically all of the territory in which mission stations are located. Because of the enmity of Japan to Christian work the presence of American missionaries in China, Japan, and Korea resulted in embarrassment and persecution for the native Christians. Hence the missionary force in these three countries was withdrawn. Of a total of more than 200 missionaries only 24 remain and these are interned in China, Japan, the Philippine and Hawaiian Islands.

In the homeland the Church maintains four theological seminaries, one training school for lay

workers (white), two training schools for colored, thirteen colleges, eight junior colleges, two preparatory schools, three mission schools, four mountain schools, two Mexican mission schools, and sixteen orphans' homes and schools. The official organ of the Church is the *Presbyterian Survey*, published monthly.

The 83rd General Assembly of the Church convened in Montreat, N.C., May 27, 1943, with 340 Commissioners present. Rev. Donald W. Richardson, D.D., Professor of Christian Missions, Union Theological Seminary, Richmond, Va., was elected Moderator.

The number of ministers who entered the Chaplaincy of the Armed Forces is in excess of the quota of this Church. On May 11, 1943, there were 168, of whom 114 were in the Army and 54 in the Navy. The Defense Service Council assists churches adjacent to army camps by providing funds to supplement normal work. Additional facilities and personnel are needed for the sudden and abnormal demands made upon the churches by the presence of so many service men, and a special fund of \$100,000 was authorized to meet these needs. Another problem results from the wartime shifting of population; to assist the churches in meeting this challenge a special appeal was authorized for the raising of \$250,000.

The 1944 meeting of the General Assembly will convene in Montreat, N.C., on May 25. Rev. E. C. Scott, D.D., is Stated Clerk and Treasurer, with office at 1120 Liberty Bank Building, Dallas 1, Texas.

United Presbyterian Church of North America. A member of the family of Presbyterian Churches, of Secession and Covenanter origin, formed by the Union in Pittsburgh, Pa., May 26, 1858, of the Associate and Associate Reformed Churches. The General Assembly of the Church convened in Westminster College, New Wilmington, Pa., May 26, 1943. The membership of the church is 191,369 in America and 66,298 in Egypt and India. The contributions in America averaged \$25.86 for the year. The Moderator of the General Assembly is Rev. W. Bruce Wilson, D.D., of Pittsburgh, Pa.

Cumberland Presbyterian Church. One of the Presbyterian bodies whose chief strength is in the Southern States. The 1943 statistical report shows: churches, 1,069 reporting; ministers, 765; total membership, 78,018, a net gain of 6,198 members over the previous year, with 199 churches making no report. A general assembly which meets annually is the supreme judiciary, the 1944 meeting to be held in place not yet selected, June 15-20, 1944. Rev. A. A. Collins, Lubbock, Tex., was Moderator of the general assembly in 1943 and the Rev. D. W. Fooks, of Nashville, Tenn., was stated clerk, treasurer, and general secretary.

PRESIDENTIAL CANDIDATES. See UNITED STATES under *Politics*.

PRICE ADMINISTRATION, Office of (OPA). The Office of Price Administration was active during 1943 in three interrelated fields: price control, rent control, and rationing. OPA's most important action in the retail price field was the establishment of dollars-and-cents ceiling prices on most food sold at retail on a community, zone, and national basis. Under the regulations, it was necessary for each retailer to post in his store a list of top legal prices supplied by OPA. This had two important advantages: first, it was no longer necessary for each retailer to laboriously compute his own prices and, second, the housewife could now see the top legal prices which local stores could charge for specific

items, quantities, and also brands of food products.

By the end of 1943, OPA had established three kinds of ceiling prices: (1) *Dollars-and-cents ceiling prices*; specific prices which were applied nationally or in certain zones or community areas. Maximum prices for meat, soap, and women's rayon hose were fixed on this basis. The "community food prices" are specific dollars-and-cents prices for essential foods applying only within a given community. (2) *Fixed mark-up ceiling prices*; used, for example, in setting prices on shoes. This method controls the amount wholesalers and retailers may add to the original cost of the goods to them. (3) *The General Maximum Price Regulation* of April 28, 1942, permits ceiling prices to be based on those charged during March, 1942. This technique has been principally used to cover clothing and household furnishings.

It was soon found impractical to apply dollars-and-cents prices arbitrarily to all types of stores. Price differentials have always existed between different classes of retailers; thus the effect of setting a single price high enough to cover the expenses of small, independent stores would have been inflationary in regard to large chain stores with lower operating costs. On the other hand, a price allowing only for the low costs of the large retailer would have been ruinous to the small independent.

In setting maximum prices on retail foods, therefore, OPA divided all retail stores into four groups: OPA 1—independents with less than \$50,000 gross income per year; OPA 2—independents grossing between \$50,000 and \$250,000; OPA 3—chain stores with gross incomes less than \$250,000 (if there are less than 4 stores in the chain with combined earnings of less than \$500,000, each store is placed in OPA 1); OPA 4—all stores with gross incomes of more than \$250,000.

At the same time OPA established community-wide food price programs, volunteer price panels were set up in all War Price and Rationing Boards. By informing merchants regarding the details of price regulations and by checking upon violations of the price ceilings, these price panels provided greater participation of the community in obtaining compliance with price rules.

Under authority delegated by the Emergency Price Control Act, OPA had begun to regulate residential rents in 1942. In so doing, OPA divided the country into "defense rental areas." In each area, rents are frozen at the level prevailing on a specific date, usually Mar. 1, 1942. By Dec. 31, 1943, OPA had established 241 rental area offices for the 342 defense rental areas.

By Dec. 31, 1943, the following items had been rationed: tires, automobiles (new), typewriters, sugar, gasoline, bicycles, rubber footwear, fuel oil, coffee (removed from rationing July 29, 1943), heating stoves (in eastern states), shoes, processed foods, meats and fats, pressure cookers (removed from rationing, December 29), and refrigerators.

The following paragraphs present in greater detail the conditions with which OPA has worked and the scope of its activities.

The purpose of OPA is to keep down dwelling rents and the prices of war materials and consumers' goods and to ration scarce consumer goods. During its first year and a half (down through 1942) OPA launched programs of broad scope embodying the price control of almost all things Americans wear, use, and eat and the rationing of such important scarce commodities as gasoline, fuel oil, and shoes. In 1943 the programs were significantly extended and at the same time modi-

fied in many important respects. Serious gaps in the price control structure were bridged by ceilings on animal feeds, fresh fruits and vegetables, used commodities, and on various primary products, most important of which were live hogs. Rationing assumed an increasingly significant place in American life with the inclusion under the program of meats, processed foods, and dairy products. Administrative policy in 1943 stressed the need for greater participation in the program by the general public. The local War Price and Rationing Boards, comprised chiefly of volunteers, were given greatly widened responsibilities in both the rationing and price programs. Price panels were established in local boards throughout the country to promote compliance with the regulations among retailers and consumers in the community and to provide a channel for the consideration and settlement of consumer complaints. Closer relations with industry were brought about through the fuller development of industry advisory committees, set up to iron out special problems and to further the exchange of viewpoints between the agency and the business world. There was considerable restaffing of the agency's Price Department in order to comply with the so-called "business experience" amendment to the National War Agencies Appropriations Act for 1944 requiring that all key policy positions in the OPA be held by men who "in the judgment of the Administrator . . . shall be qualified by experience in business, industry or commerce." A Labor Office and an Industry Council had been established in the agency prior to 1943. An Agricultural Relations Advisor was appointed during the year to promote better understanding between the OPA and the country's 12,000,000 farmers. A Consumer Advisory Committee was also appointed to study the effects of OPA policies on the consumer and to advise with operating people on how policies and regulations might be made more effective.

By the end of 1943 nearly the whole price structure of the Nation had been brought under control through the General Maximum Price Regulation and over 500 individual maximum price regulations. Maximum prices, determined either by a "freeze date" or by calculations using formulas based on costs, had been established for most of the materials going into armament production as well as essential semi-fabricated and fabricated industrial products. Ceilings had been established on residential rents in defense rental areas in which 80,000,000 people lived. OPA estimated that price control from its inception through the end of 1943 had saved the Nation \$65 billion in the cost of war production and construction. Price control by the end of 1943 had saved consumers nearly \$22 billion on cost-of-living items. Americans would have had additional outlays of these dimensions if prices in World War II had been permitted to follow the upward spiral of World War I. OPA's rent control program during 1943 prevented increases in residential rents in critical areas estimated at a billion dollars.

Despite the general success of the program, some serious signs of inflation became apparent early in the year. Major threats were runaway prices in uncontrolled products, the difficulty of enforcing numerous individual ceilings, and a growing black market. These dangers were met and for the most part overcome. The President issued a "Hold-the-Line" order in April directing the Price Administrator to place ceilings on all cost-of-living commodities, to prevent any further increases so far as possible and to reduce excessively high prices.

Following this order a four-point program was entered upon by the OPA: (1) to extend price control across the board, to include a number of formerly exempt commodities such as fish and fresh fruits and vegetables; (2) to reduce prices which had got out of hand, including prices of meats, butter, and fresh fruits and vegetables; (3) to extend the use of specific dollars-and-cents ceilings to include retail foods; and (4) to provide more vigorous enforcement of the program.

Under the third of these points, the community price program was launched during the late spring and summer. This was designed to remedy a serious defect of the General Maximum Price Regulation and the "formula type" regulations under which many commodities had been taken out of the general regulation. This defect, which made compliance at retail very difficult, was the lack of a clear and stated price which seller and buyer alike could know to be the legal price. Under the GMPR, ceiling prices were those of a base date and varied from retailer to retailer. Under the formula type regulations, standard calculations were applied to individual cost data, and the resulting calculated price varied from one retailer to another. Under the community price program, the established formulas were applied to costs typical of each class of retail food outlet to arrive at specific prices. These prices, calculated separately for each community, were required to be posted in the retail stores where all parties could readily consult them. At the close of the year prices had been set under this program on between 300 and 700 food and grocery items in nearly 300 communities including about 100 million people.

Under the new program, ceiling prices for the most important items in the consumer food budget were set on a community basis. Specific dollars-and-cents prices were set for four classes of retail outlets, classified according to volume of business and type of service.

The extension of the dollars-and-cents ceilings was paralleled during the first part of the year by the increasing use of quality standards in price regulations. The passage of the Taft amendment to the Commodity Credit Corporation Act on July 16, however, prohibited the OPA from requiring grade labeling in any case and from requiring standards except where "absolutely essential to an effective system of fixing prices." Grade labeling requirements were thereupon removed from 20 regulations, and other regulations were revised to assure complete conformity with the Congressional mandate. The Director of the Office of Economic Stabilization, however, ordered continued the Federal grading and marking of carcasses and wholesale cuts of beef, veal, lamb, and mutton, which had been recommended and approved by the meat industry.

By the time the "Hold-the-Line" program had been put into effect, prices on a number of commodities had risen so steeply that emergency measures had to be taken. Roll-backs of some prices were accomplished by reducing inflated margins of distributors and producers. In other cases, however, prices could not be reduced without also reducing margins or farm returns below reasonable levels. In such cases subsidies were authorized by the Director of the Office of Economic Stabilization in order that the reduction of retail prices would still permit a fair return to producers and distributors. The reductions were financed by the Commodity Credit Corporation and other agencies having funds available for the purpose. Subsidies intro-

duced during the year kept down the retail prices of a very significant group of cost-of-living staples, including meats, butter, cheese, and milk, apples, bread and flour, peanut butter, and certain canned vegetables. The net result of the program as a whole was apparent in the fact that, despite rising inflationary pressures, the cost of living, as reported by the Bureau of Labor Statistics, rose only 3½ per cent during 1943, as compared with 9 per cent in 1942 and 10 per cent in 1941. (See *LIVING COSTS*.) Whether or not subsidies would be continued in the control of food prices was still to be decided by Congress at the end of the year.

Rationing was not only extended during 1943 but was also modified in a number of important respects. Early in 1943, the first "point rationing" coupon book, War Ration Book Two, was issued. Under the point system, coupons designated for certain foods are valid for a certain number of "points," and the amount of goods that can be purchased is determined by the point values assigned to each item. These point values are changed from time to time according to the supply situation. War Ration Book Three was distributed during the summer of 1943 and War Ration Book Four in October. A plan for supplementing ration stamps with plastic tokens was scheduled to go into effect early in 1944.

Food was, in general, rationed according to the principle of equal division of available supply among all consumers. Equal treatment was also accorded in the shoe program and the basic gasoline ration. Other things such as fuel oil, automobiles, extra gasoline, etc. were rationed differentially according to need. Moreover, the local boards were, during the summer of 1943, given authority to allot additional quantities of ration points for food to people living or working in isolated areas where they could not otherwise get a nutritionally adequate diet.

An important development in the rationing program during 1943 was the growth of the ration banking plan worked out in cooperation with the American Bankers' Association. About 84 per cent of the nation's commercial banks participated in the program, under which retailers, wholesalers, primary suppliers, bulk consumers, and institutional and industrial users were enabled to deposit their ration currency in cooperating banks and to make and receive ration payments in the form of checks. It was estimated that approximately 50 million deposits would be made annually and about 637 million items would be handled by the banks each year of rationing. The ration banking program relieved local boards throughout the country of a tremendous burden of counting, auditing, and exchanging stamps and coupons for certificates of larger denomination. The producers and distributors of rationed goods likewise benefited from the time and cost-saving features instituted by ration banking.

History. The Office of Price Administration was created Apr. 11, 1941, by executive order of the President, and was first known as the Office of Price Administration and Civilian Supply. It took over the price stabilization and consumer protection work started by the Advisory Commission to the Council of National Defense, the initial organization set up to direct the nation's armament program (see *YEAR BOOKS* for 1941, 1942, and 1943). The executive order directed the price agency to take "all lawful steps necessary or appropriate in order to prevent price spiraling, rising costs of living, profiteering, and inflation resulting from market conditions caused by the diversion of

large segments of the nation's resources to the defense program, by interruption to normal sources of supply, or by other influences growing out of the emergency."

The Price Stabilization Division of the National Defense Advisory Commission issued the first maximum price schedule, Feb. 17, 1941, covering second-hand machine tools, prices of which were threatening to skyrocket under war demand. Price schedules for aluminum scrap and secondary aluminum ingot, zinc scrap and secondary zinc scrap, iron and steel scrap, and other important war materials followed. The creation of the Office of Price Administration and Civilian Supply (which became the Office of Price Administration in the Office for Emergency Management, August, 1941) greatly strengthened the authority to issue and enforce maximum price schedules. The Office, by delegation of executive authority, possessed all the powers that had been available to the Price Fixing Committee of the War Industries Board in 1917-18. There was, however, one defect in the Office's power—there were no direct penalties for violations of price schedules. This was corrected on Jan. 30, 1942, when the President signed the Emergency Price Control Act of 1942. The Act, for the first time, gave the Office of Price Administration undisputed statutory power, defining its duties to control prices and rents and providing it with specific means to punish violators. Leon Henderson, who had directed price control operations from the start became the first OPA Administrator. Provided with statutory power, and authority to enforce its orders, all existing "price schedules," of which there were close to 100, became "regulations" within the meaning of the Act.

On Apr. 28, OPA issued its General Maximum Price Regulation, which set the highest prices charged in the month of March, 1942, as the ceiling prices for virtually everything the American family wears or uses, and for around 60 per cent of all foods. On May 11, 1942, the new ceilings became effective at the manufacturers' and wholesalers' levels, and one week later, on May 18, 1942, at the retail level, carrying price control into every store and shop throughout the nation. Rent regulations established ceiling rentals in areas where inflationary rises were appearing. The general practice was to establish as a ceiling for an area the actual rent charged as of the date when the beginning of an inflationary advance was noted.

The basic weakness in price control after the General Maximum Price Regulation had gone into effect was that it provided ceilings for only 60 per cent of foods, due to limitations of the Emergency Price Control Act of 1942. As a result, the cost of living continued to advance, due to rises in the prices of uncontrolled foods. Between May and September, 1942, foods controlled by GMPR advanced only three-tenths of 1 per cent. In the same period uncontrolled foods advanced 10 per cent, and the increase was translated into a 1.6 per cent increase in the cost of living. To halt this uptrend, Congress amended the Emergency Price Control Act of 1942 to extend its coverage. The Stabilization Act, amending the earlier statute, was approved by the President Oct. 2, 1942, and with this new enabling legislation, price control was extended to provide retail ceilings for 90 per cent of all foods. Toward the end of 1942, OPA issued increasing number of dollars-and-cents maximum prices to replace the "freeze date" prices of the General Maximum Price Regulation or the "formula" maximums which had to be calculated by the seller on the basis of costs.

The trend toward dollars-and-cents ceiling prices was continued in 1943. Compliance with these ceilings was made more effective through the Community Price Program, under which uniform retail prices for most standard groceries are published at regular intervals.

Leon Henderson, who had been OPA Administrator for nearly 2 years, resigned on Jan. 26, 1943, and was succeeded by Prentiss Brown. On April 8 the President issued the "Hold-the-Line" order under which the four-point program of the office was announced by the Administrator on April 30 and put into effect during the summer and fall of 1943. On November 8, Mr. Brown resigned and Chester Bowles, who had been General Manager since July, became the third OPA Administrator. The first few months of his administration were characterized by emphasis on cooperation with industry and consumer groups and by increasing decentralization of the program.

The delegation of authority to OPA to ration items made scarce by the war was first made experimentally on Dec. 27, 1941, when hostilities in the Pacific choked off rubber imports from the Far East, and it became clear that automobile tires would have to be equitably distributed to essential users. This rationing authority was generalized and made permanent by Directive No. 1 of the War Production Board, issued Jan. 27, 1942.

Under the general rationing arrangement, WPB determines the quantity of scarce commodities that are to be made available for civilian consumption except in the case of foods. Directives to ration foods are issued to OPA by the War Food Administration. If the supply of a commodity for civilian use is so limited that it cannot be fairly distributed through the usual trade channels, and if the item is considered essential to civilian welfare, OPA is directed by WPB or WFA to ration it.

Tires, automobiles, and typewriters were among the first commodities upon which the impact of war was felt. They were rationed by certificate, as were bicycles. But by the end of 1942, the use of coupon books in rationing was well established. War Ration Book One, put in use in May, 1942, first provided coupons for sugar, then also for coffee. A separate coupon book was issued for rationed gasoline and coupon sheets for rationed fuel oil.

Point rationing was started early in 1943 with War Ration Book Two for meats and processed foods. War Ration Book Three and Four consisted of point coupons for meats and other commodities. Book Three was distributed by mail June 15–July 15 and Book Four through individual registration in October.

By the end of 1943, plans had been completed for rationing coal, should it become necessary. Dates upon which rationing of various products began: 1942—new tires and tubes, January 5; recapped and recapping tires, February 19; new automobiles, March 2; typewriters, March 13; sugar, April 28; gasoline in 17 Eastern States, May 15; nation-wide mileage rationing, Dec. 1, 1942; bicycles, July 9; rubber footwear, September 29; fuel oil, October 1; coffee, November 29 (released July 1, 1943); coal and oil heating stoves for private dwellings in 30 states, December 18 (nation-wide Aug. 24, 1943). 1943—shoes, February 7; processed foods, March 1; meats, fish, fats, oils, cheese, March 29; canned milk and soft cheeses, June 30; solid fuels in Pacific Northwest, September 20; jellies and preserves, October 31.

Rationing programs are administered directly by approximately 5,500 local War Price and Ra-

tioning Boards which serve as ultimate contact points between the OPA and consumers on matters pertaining to rationing and between OPA and retailers on matters concerning price control.

In general the Boards operate through panels, each established to consider separate phases of the price and rationing programs. The boards, constituting "committees of neighbors," issue ration books directly to the public, determine what extra rations are needed for special cases, assign allotments of gasoline and fuel oil to users, issue purchase certificates for new automobiles, new and recapped or recapping tires and other certificate-rationed items, and perform other rationing administrative functions. The Price Panels, which by the end of 1943 were functioning in most local boards, have the important job of securing maximum compliance with price regulations at the retail level. They help to distribute regulations and explanatory price control material to retailers. They collect price information and check retailers prices upon receipt of consumers' complaints of violation. Local Board members serve without pay. They are selected by State or Local Defense Councils, and their names recommended to OPA for approval.

Organization. The organizational set up of OPA at the beginning of 1944 was as follows: Administrator, appointed by the President; two chief aides, one for national office and one for field operations. Eight units, responsible to the Administrator, act in an advisory capacity: *General Counsel*, legal advisor, drafts opinions and represents the Agency before the Emergency Court of Appeals; *Economic Advisor*, chief general policy aide and director of research; *Office of Accounting Services*, supervises all accounting investigations; *Labor Office*, clearance point in the Agency for all issues of labor policy; *Industry Council* presents the industry point of view; *Racial Relations Office* deals with Negro participation in OPA program; and *Credit Policy Office* handles problems of consumer credit control. There are six Deputy Administrators directly responsible to the Administrator of OPA: Deputy Administrator in charge of Price; Deputy Administrator in charge of Rationing; Deputy Administrator in charge of Rent; Deputy Administrator in charge of Information; Deputy Administrator in charge of Administrative Management, and Deputy Administrator in charge of Enforcement.

The *Price Department* is responsible for issuing maximum price regulations to control commodity and service prices throughout the country. It is made up of an Executive Office, an Export-Import Price Control Office, a Legal Division, a Standards Division and six Price Divisions. Each division in turn is made up of smaller units called branches, headed by a price executive or chief. The branches handle administration of pricing for specific groups of kindred items. The Price Divisions and branches are as follows: *Food Price Division* (Branches: cereals, feeds and agricultural, grocery products, meats, fats and oils, fruits and vegetables, poultry, eggs and dairy products, food distribution, and administrative services); *Consumer Goods Price Division* (Branches: Administrative, Economic Analysis, Consumer Durable Goods, Manufactured Articles, and Primary Products); *Fuel Price Division* (Branches: Petroleum, Solid Fuels); *Industrial Materials Price Division* (Branches: Iron and Steel, Nonferrous Metals, Building Materials and Lumber, Metal Mining Analysis); *Industrial Manufacturing Price Division* (Branches: Chemicals and Drugs, Consumers Durable Goods, Machinery, Paper and Paper Products, and Rubber). The branches in turn are subdivided into sections.

which handle homogeneous groups of items. Sometimes sections are still further subdivided into units.

The *Rationing Department* is made up of four Divisions: the Automotive Supply Rationing Division, the Food Rationing Division, the Fuel Rationing Division, and the Miscellaneous Products Rationing Division. Each is headed by a Director. The organizational structure of the Rationing Department closely parallels that of the Price Department, with Divisions divided into Branches and Sections.

The *Rent Department* is organized into an Executive Office, a Program and Analysis Office, an Operations Division, and a Legal Division. Rent control is administered through offices in each of the 370 defense rental areas.

The *Enforcement Department* was formerly a division of the legal department, which was disestablished during the summer of 1943. The Price, Rent, and Rationing Divisions of the former Legal Department were transferred to the Price, Rent and Rationing Departments. Legal functions were transferred to the office of the General Counsel. The Enforcement Department is organized primarily on a commodity basis. It consists of an Executive Office, Office of the Chief Investigator and five divisions: *Litigation Division* (Branches: Appellate, Briefing, and General Litigation); *Food Enforcement Division* (Branches: Meat and Dairy, Groceries, Agricultural Commodities); *Apparel and Industrial Materials Enforcement Division* (Branches: Apparel, Textiles and Materials, Industrial Materials, Industrial Manufacturing); *Fuel and Consumer Enforcement Division* (Branches: Automotive Supplies, Heating Fuel, Consumer Durable Goods); *Rent and Services Enforcement Division* (Branches: Rent and Service).

The *Information and Administrative Management Departments* perform operative functions within OPA.

There are nine Regional Offices, as follows: Region No. 1, Boston, Mass.; Region No. 2, New York, N.Y.; Region No. 3, Cleveland, O.; Region No. 4, Atlanta, Ga.; Region No. 5, Dallas, Tex.; Region No. 6, Chicago, Ill.; Region No. 7, Denver, Colo.; Region No. 8, San Francisco, Cal.; Region No. 9, Washington, D.C. (for Territories and Possessions). In addition, OPA has 93 District Offices which serve as primary points of supervision over the Local War Price and Rationing Boards and the defense rental areas offices.

Administration of the Office of Price Administration in 1943 was characterized by a tendency toward decentralization and increasingly great local control. Headquarters of OPA are in Washington, D.C.

See AGRICULTURE under Wartime Price Control; BUSINESS REVIEW; UNITED STATES under Inflation and Production; articles on industries and products affected by OPA controls.

CHESTER BOWLES.

PRICES. See AGRICULTURE; BUSINESS REVIEW under *Commodity Prices*; LIVING COSTS AND STANDARDS; articles on crops, products, etc. *Price Ceilings* in the United States are imposed by the Office of Price Administration (OPA), (q.v. under PRICE ADMINISTRATION). For various aspects of *Price Control* and *Price Stabilization Policies*, see AGRICULTURE under *Wartime Price Control*; BUSINESS REVIEW; LAW under *War Decisions*; UNITED STATES, especially under *Inflation*; WAR MOBILIZATION, OFFICE OF; also, CANADA, CHILE, COLOMBIA, CUBA, EGYPT, FRANCE, JAPAN, PERU, and SOUTH AFRICA under *History*. For *Price Roll-Backs*, see BUSINESS REVIEW;

FOOD INDUSTRY; LIVING COSTS AND STANDARDS. For *Price-Support Programs*, see topics listed under SUBSIDIES.

PRIMACORD. See CHEMISTRY under *Explosives*.

PRINCE EDWARD ISLAND. An eastern maritime province of Canada. Area, 2,184 square miles. Population (1941 census), 95,047 (49,228 male; 45,819 female), comprising, by racial origin, British Isles races 78,714, French 14,799, etc. Religious membership (1941 census): Roman Catholic 42,743, United Church 24,005, Presbyterian 14,724, Anglican 5,739, Baptist 5,443, etc. In 1942 there were 2,135 living births, 959 deaths, and 778 marriages. Chief towns: Charlottetown (capital) 14,821 inhabitants in 1941, Summerside 5,034. Education (1940-41): 19,689 students enrolled in schools and colleges.

Production. The gross value of agricultural output in 1942 was \$23,379,000 (field crops accounted for \$12,834,000, farm animals \$5,291,000, milk \$2,503,000, poultry and eggs \$2,014,000). Chief field crops (1942): oats 3,500,000 bu., mixed grains 1,440,000 bu., potatoes 244,200 tons, turnips, etc. 184,250 tons, hay and clover 345,000 tons. Livestock (June 1, 1943): 100,600 cattle (including 46,300 milk cows), 65,500 swine, 56,000 sheep, 27,340 horses, 1,063,300 hens and chickens. Fur output (1941-42): 32,427 pelts valued at \$735,189. Fisheries catch (1942): \$1,639,539. Manufacturing (1941): 213 plants, 1,105 employees, \$680,883 for salaries and wages, \$3,229,433 for cost of materials, \$1,347,990 was the net value of production.

Government. Finance (year ended Dec. 31, 1942): revenue \$2,338,462; expenditure \$2,335,915; total direct and indirect liabilities (less sinking funds) \$9,594,582. The executive authority is vested in a lieutenant governor who is advised by a ministry of the legislature. In the Legislative Assembly there are 30 members elected (15 by real property holders and 15 by universal male and female suffrage) for a five-year term. Four members (appointed for life) in the Senate and four elected members in the House of Commons represent the province in the Dominion Parliament at Ottawa. Lieutenant Governor, Bradford W. LePage (app. Oct. 2, 1939); Premier, J. Walter Jones (Liberal). At the provincial general election of Sept. 15, 1943, there were elected 20 Liberals and 10 Progressive Conservatives. See CANADA.

PRINCIPE. See SÃO THOMÉ AND PRINCIPE.

PRINTING. See BUSINESS REVIEW; PLASTICS under *New Uses*. Compare LITERATURE; MAGAZINES; NEWSPAPERS; PAPER.

PRINTS. See ART.

PRIORITIES. See WAR PRODUCTION BOARD under *Civilian Requirements*; also the industries and products affected.

PRISONERS OF WAR. See the topics listed under WAR PRISONERS.

PRISONS, PAROLE, AND CRIME CONTROL. The war dominates the administration of prisons just as it does every other phase of American life. In both State and Federal institutions, every effort is being made to gear the available manpower and the available equipment to the production of war materials; every fit and eligible prospect for the army is being examined and reexamined as a possible prospect for induction; every other prisoner is being urged to prepare against the day of release in order to take his place at the machine, on the assem-

bly line, or in some position essential to the war effort. Prisoners are putting their wages into war bonds and stamps, or contributing their blood to swell the supply which will save the life of some wounded fighter. Others are submitting to various scientific tests to develop new ways of saving shipwrecked sailors, of meeting extremes of heat and cold, of overcoming the scourge of all armies—the dread venereal infection.

A report issued by the Prison Industries Branch of the War Production Board in November, 1943, estimated that State prisons were producing annually approximately \$10,000,000 in war materials including assault boats, shell cases, blankets, bomb crates, bomb noses, truck bodies, tent pins, submarine nets, cargo nets, shirts, boiler suits, rope, stretchers, flags, leather insignia, and salvage work. Federal prison industries reported an annual output of \$18,789,000 worth of products of which 98 per cent were war materials including mattresses, brooms and brushes, shoes, gloves, wooden boats, canvas water tanks, bomb fins and noses, metal beds and trays, and other items. Production of food in State and Federal prisons has also increased to meet war needs. It is estimated that 25,000 State prisoners were engaged in agricultural operations in 1943, with an increase of 10 per cent over last year's acreage, and that the volume of canning and dehydration of fruits and vegetables has nearly doubled in State prisons. Federal prisons harvested nearly a million dollars worth of farm produce in 1943, an increase of nearly 30 per cent over the past year.

The value of prison production for war needs, however, is not to be measured alone in dollars. One of the most potent results of making something directly related to the war has been the effect on inmate morale. Many prisoners have voluntarily accepted longer work hours and worked in shifts to increase production. The possibilities of getting into war plants on release have encouraged prisoners to undertake vocational training supplementing their shop practice. Prison morale was never better.

Literally thousands of prisoners have volunteered for induction into military service under the new program inaugurated by the War Department and the Selective Service System, and approximately 2,000 have already been paroled and inducted into the army. Since the new policy affects ex-prisoners also, it has been variously estimated that between 25,000 and 50,000 ex-prisoners have been inducted into military service. The result in many prisons has been to renew the hope in prisoners' minds that they too may again share in the responsibilities and the privileges of citizenship.

Hundred of prisoners have become regular donors to the Red Cross blood bank. In a recent campaign in State prisons throughout the country, prisoners subscribed \$968,000 in War Bonds, or enough to buy three fortress bombers.

One of these bombers, the prisoners requested be named "The Spirit of St. Germain." Arthur St. Germain was one of 63 prisoners at the State Prison Colony, Norfolk, Mass., who took part in an experiment to test the use of beef blood plasma in the human blood stream. St. Germain lost his life in the process and was posthumously pardoned for his sacrifice. Other prisoners are cooperating in a variety of medical experiments as human guinea-pigs for the benefit of the men in war service everywhere. During the previous wars, little or no effort was made to enlist the interest or the efforts of prisoners except under compulsion. The

outstanding fact in the present contribution being made by State and Federal prisoners toward the war in 1943 was that such effort was voluntary. This too marks a new note in the attitude of both prisoners and officers toward their responsibilities.

"Work Leaves" for War Production. Some unusual and significant practices have been adopted in some State prisons, as a result of war demands. Arizona, for example, permitted prisoners to travel over the State, from farm to farm, picking cotton, the prisoners being paid the prevailing wage for their work with the prisoners paying their guards' expenses out of their own wages. Virginia and North Carolina allowed prisoners to assist farmers in gathering the potato crop. Montana has had some 200 inmates assisting in agricultural work during the entire year. Maryland has permitted prisoners to help farmers during the harvest season. Washington adopted programs of "work leaves" for prisoners, and California established "harvest camps" from which prisoners were assigned to help local farmers harvest crops. Considerable praise and some criticism of these practices were noted in the press. Inevitably some mistakes were made in the choice of prisoners for such assignments and there were some abuses of the privileges granted. California harvest camps came into disfavor because of the laxness with which they were administered and Governor Warren is presently reconsidering the entire program. Such practices, however, open up new possibilities in serving sentences under community supervision and deserve the careful study of those interested in a better correctional program.

Georgia Abolishes the Chain Gang. Georgia has abolished the chain gang. This time the State legislature, urged to action by Gov. Ellis Arnall, passed laws prohibiting the use of leg irons, chains, and similar devices on convicts in the State of Georgia. The legislature also established a new State Department of Correction under a director who proposes to clean up the disgraceful conditions which brought the relatively new Georgia penitentiary at Tattall into disrepute and to abolish the present system of State and county road camps which are the real source of Georgia's unsavory reputation in prison administration. The new director, who took office only during the latter part of 1943, has obtained the help of the Federal authorities and is aggressively pressing the reformation of Georgia's malodorous prison system.

Prison Populations. Prison populations, exclusive of wartime offenders who are confined chiefly in Federal institutions, continue to decline. It is estimated that the overall population of State and Federal prisons has declined since the war from about 175,000 to approximately 125,000. The Federal Prison System has shown a sharp decrease in commitments for offenses not connected with the war, from 21,223 in 1941 to 17,966 in 1942 and 11,853 in 1943—a decline of 44 per cent since Pearl Harbor. In both State and Federal prisons, it is evident that the decline in prison populations has also been accompanied by a change in the character of the population. As the reformable, short-term type of offender is released, the tendency is for the habitual, longer-term offender to dominate the prison since the former type of criminal has been absorbed in the war effort and is not getting into prison. In Federal prisons also there is a new type of offender—the saboteur, the traitor, the Selective Service violator, and the service man convicted under military court-martial. These conditions offer new problems to the

prison official which must be met with new methods.

Wartime Offenders. Nearly one-third of all Federal prisoners committed during 1943 were wartime offenders, totaling 4,777. Of these 3,145 were violators of the Selective Service Act, approximately half of whom claimed conscientious objections to war. There were also 1,121 commitments for violations of other national defense laws, including 399 commitments for violation of the May Act controlling vice conditions around military camps, 269 for wearing a military uniform illegally, 176 gasoline and other rationing cases, 15 sedition cases, and 2 cases of treason. In 1943, there were 511 military court-martial cases received including 152 for sodomy, 62 for assault, 49 for robbery, and 40 for homicide. Approximately two-thirds of these military cases received sentences of five years or more and nearly one-third were from ten years to life.

A small group of absolutists whose objection to war is only part of a program for changing the whole social, political, economic, and cultural order, has proved a problem to Federal prison officials. Of these, two conducted a hunger strike for 82 days in protest against conditions in civilian public service camps which are operated for conscientious objectors, with one or two exceptions, by religious organizations. Two other groups comprising a total of 25 or 30 prisoners went on work strike in two Federal prisons because the prison officials would not accede to their request that they be allowed to live and eat with Negro prisoners. Seven or eight of these also conducted a hunger strike for 63 days because they objected to the application of the mail inspection policies of the Bureau by institution officials. Altogether less than 50 out of the total commitment of approximately 2,500 such conscientious objectors who have been sent to prison since the passage of the Selective Training and Service Act of 1940 up to Jan. 1, 1944, have sought to use their imprisonment as a springboard for publicity, martyrdom, or other compensation for their lack of effective action in time of crisis.

In general, the policy of the Bureau is to treat all violators of Selective Service like other Federal prisoners with allowance for individual needs and differences in accord with the accepted policy of individualized treatment. The only exception to this rule is the policy not to assign sincere conscientious objectors to industries producing war products in violation of the inmate's convictions. Ninety-eight per cent of these violators cooperate in the institution program and frequently produce outstanding results on the farm and on special assignments.

Prison Scandals. Of prison "scandals," Illinois, Oklahoma, South Carolina, and California made the headlines in 1943. Federal Judge John P. Barnes heard a volume of testimony on conditions in Illinois prisons which he described as a "disgrace to civilization" when conducting a hearing on a writ of habeas corpus in the case of a prisoner serving a sentence of 199 years for murder. It was evident from Judge Barnes' remarks in court in dismissing the writ that while he could legally do nothing on the plea of the prisoner involved, he was personally persuaded that the prisons of Illinois needed a housecleaning. The legislature in South Carolina refused to pass any of the three bills introduced to prevent recurrence of some of the evils exposed in the State penitentiary by a three-man committee of the house in a 976-page report, and ignored the recommendation of the committee that

five former penal officials be presented to a grand jury for indictment. In Oklahoma a former governor and his pardon and parole officer are under indictment charged with conspiracy and bribery in an \$8,000 parole pay-off for which a former State legislator is now serving a seven-year sentence in the Oklahoma penitentiary. In California, the warden of the State Prison at Folsom was forced to resign as a result of irregularities connected with the assignment of notorious prisoners to "harvest camps" who then took advantage of the situation to visit friends in nearby cities.

Parole. According to the American Parole Association, approximately 92 bills on parole and closely related subjects were introduced in 29 State legislatures and the Federal Congress. The majority of these proposals related directly to the release of prisoners for service in the army or in essential industry. Some aimed to reward parolees who earned a good service record by discharge from parole, by pardon, or by restoration of civil rights usually contingent on honorable discharge from the armed forces.

In Louisiana and Virginia, independent parole boards, in Mississippi a Board of Pardons, and in Kentucky a Division of Probation and Parole created in 1942, were put into operation. In 1943 Georgia and Oklahoma established independent boards and both States have pending constitutional amendments which will give more complete powers to these boards. Bills establishing new parole units failed of passage in Colorado, Texas, and Missouri. In Indiana, Pennsylvania, and West Virginia, bills which threatened the existence of parole units already functioning were introduced but failed to pass. In California power was granted to parole inebriates to medical authorities. Several bills were introduced emphasizing proper classification of inmates as a basis for parole selection. On the whole, considerable progress was recorded during the year in the field of parole. It is also apparent that a larger percentage of prisoners have been granted release on parole than is the case in peace times. The fact that these parolees have been able to find placement in well paying jobs probably accounts for the fact that a smaller proportion of them than usual have violated their parole.

The plans of the Selective Service System to establish special draft boards for each State and Federal prison for the purpose of accelerating the release of those who were placed in 1-A have not worked as well as it was hoped. Army regulations were broadened to permit the direct induction of paroled prisoners when the consent of the Commanding Generals of the several service commands could be obtained. This has proved an unwieldy and complicated procedure resulting in the earlier release and induction of only a relatively few prisoners. As previously stated, probably not more than 2,000 of the 125,000 men in State and Federal prisons have been accepted into the army by this route.

Army and Navy Rehabilitation Centers. One of the outstanding developments of the year in the field of correction has been the establishment of rehabilitation centers for soldiers convicted of various crimes by military courts-martial. To these centers are being sent men who seem to have promise of readjustment and restoration to duty. It does not matter whether their sentences are for one, two, five, ten, or twenty years; if they are found to be hopeful material, they are sent to a rehabilitation center and if they readjust there, may be transferred at the end of six months or a year again to special army units. If their record is satisfactory, the

War Department agrees to wipe out their previous sentences and once more restore them to honorable service. Such use of imprisonment as a period of discipline, observation, diagnosis, and future planning, plus a period of adjustment in a normal environment, is in line with the most progressive penological thought. Such demonstrations in actual practice will have an important bearing on postwar plans for dealing with men convicted of crime in the civil courts.

Some difficulties during the past year have arisen because of the conflict between military and civil jurisdiction which occurs when a member of the armed forces commits an offense cognoscible concurrently both by military courts-martial and the civil courts. There seems to be no method or tribunal to determine definitely whether an offense committed by a soldier or sailor on a civilian while on leave or outside military reservations should be handled by the War and Navy Departments or the civil authorities. The result is that each seeks to maintain its own jurisdiction by retaining custody of the offender or through informal and ill-defined agreements which frequently result in disposition of the case harmful alike to the offender and law-enforcement. The problem is being studied by several groups including the American Bar Association which, it is hoped, will find an answer before the year is out.

Postwar Plans for Crime Control. Indications of what the postwar program may include are seen in hearings which were held in 1943 before the Judiciary Committees of the Congress on the proposed Federal Corrections Act. This proposal would supplement the sentencing power of Federal judges with the advice of a Board of Indeterminate Sentence and Parole which would examine and report on each person convicted in a Federal court before the length of sentence is finally set by the judge. Furthermore, the plan would empower the new Board of Corrections to release any prisoner under 24 years of age at any time on such conditions as it sees fit to impose, and to establish a special correctional system for treating these youthful offenders. The proposed program is based on several years' study of the whole Federal judicial and correctional program by a Committee of the Council of Senior Circuit Court Judges and the American Law Institute.

Plans for postwar crime control are being formulated by the American Law Institute, the Council of State Governments, and numerous State and Federal officials. Such plans contemplate provisions for retraining the ex-service man for civilian life and for adjusting that marginal group of citizens who will be dislocated when the armed forces are disbanded. While such a program will doubtless be most intensive during the five years immediately following the war, the program being planned must be broad enough in scope and vision to meet social needs for many years. Opportunities in prison work will be found for many men and women who have received much valuable training and experience in discipline, leadership, personnel classification, and details of organization life. To this end, in 1943 the U.S. Armed Forces Institute has prepared a course of study in "Prison Work as a Postwar Career" for men now in military service. Construction and reconstruction of correctional organization, plant and equipment to meet modern concepts and needs in the correctional field will be included in such a program and should provide work for many ex-service men not absorbed permanently into correctional work itself. Such long-range planning will need to be based on a review of penological con-

cepts, some of which go back 150 years. Finally, provisions in organization, plant, equipment, and personnel must be made to absorb the increase in arrests, trials, and convictions which will inevitably follow the discharge of millions of men now in military service and the subsequent dislocation of social, economic, and everyday life.

Among the group which is causing unusual concern to all students of the problem at the present time are those juveniles who have been absorbed into industry due to the manpower shortage or who have lost some of their customary social moorings due to the war. This group, mostly youngsters from 14 to 18 years of age, will need special attention as regards vocational training and other educational opportunities to make up for present lacks. The general "hue and cry" that juvenile delinquency is on the increase should not be interpreted as an excuse either for turning on repressive measures or for over-emphasis on recreational outlets so often relied on to meet the problems of youth. Sturdy, realistic understanding of the emotional and educational needs of youth and practical ways of preparing them to meet present and future problems will furnish a sound approach to this postwar problem.

It is already evident that crime control in the postwar period will depend less on material restraints through institutionalization and more on positive and constructive adjustment in the community. It is being taken for granted that more and more persons convicted of crimes will be treated under supervision in the community either by means of probation or after a period of confinement for observation and diagnosis or under some form of conditional release such as has been suggested in the Federal Corrections Program. The reaction against the construction of great penal institutions costing many millions, characteristic of the punitive approach to crime control was evident at the Annual Congress of Correction held in New York in November, 1943. The development of classified systems of correctional institutions with emphasis on minimum and medium types was recommended. Moreover, the proposition that rehabilitation is not possible through institutionalization only and that the prison must become merely a link in the whole correctional chain was accepted as the challenge to the new program which will follow the war.

See JUVENILE DELINQUENCY; LAW; STATE LEGISLATION under *Social*. For prison labor, see ROADS AND STREETS; STATE LEGISLATION under *Labor*; TUNNELS.

JAMES V. BENNETT.

PROCUREMENT DIVISION. A Division of the U.S. Department of the Treasury which procures supplies and services for the Government and controls the disposition of Government property, exclusive of realty. In addition to its usual peacetime activities, the Division now maintains and replenishes stocks of strategic and critical war materials, buys products for Lend-Lease and for relief distribution through the Red Cross. A Price Adjustment Board renegotiates war contracts consummated by the Procurement Division. Director of Procurement in 1943: Clifton E. Mack.

PROCUREMENT POLICY DIVISION. See WAR PRODUCTION BOARD.

PRODUCER-GAS. See CHEMISTRY under *Petroleum*; RAPID TRANSIT.

PRODUCTION RESEARCH AND DEVELOPMENT, Office of. See WAR PRODUCTION BOARD.

PROFITS. See BUSINESS REVIEW under *Industry*

Earnings; articles on industries. Compare **TAXATION** for chart on taxes and profits.

PROLECTRON. See **PLASTICS**.

PROPAGANDA WARFARE. See **COORDINATOR OF INTER-AMERICAN AFFAIRS**; **FEDERAL COMMUNICATIONS COMMISSION**; **FRENCH LITERATURE**; **PAN AMERICANISM**; **STATE, U.S. DEPARTMENT OF**; **WAR INFORMATION, OFFICE OF**; **GERMANY, JAPAN, POLAND, THAILAND**, and other belligerent countries under *History*; also, **COMMUNICATIONS**; **MOTION PICTURES**.

PROSTITUTION. See **FEDERAL BUREAU OF INVESTIGATION**; **FEDERAL SECURITY AGENCY**; **JUVENILE DELINQUENCY**; **STATE LEGISLATION** under *Social*.

PROTECTION BRANCH. See **CIVILIAN DEFENSE, OFFICE OF**.

PROTECTION OF CHILDHOOD, *American International Institute for the*. See **CHILDREN'S BUREAU**.

PROTEINS. See **CHEMISTRY**.

PROTESTANT CHURCHES. See **GERMANY, NETHERLANDS, NORWAY, and PERU**, under *History*, and the articles on various denominations in the *United States*.

PROTESTANT EPISCOPAL CHURCH. The 54th General Convention of the Episcopal Church meeting in October in Cleveland, Ohio, amid wartime difficulties and restrictions made no records for adventurous daring but courageously faced the opportunities of the day and of the peace and the postwar world. The report of the Joint Commission on Social Reconstruction, as adopted by the Convention declared that the "coming Peace must provide an over-all arrangement for international collaboration in dealing with common world problems; with supervision and control of military establishments and the creation of an international police power, with collaboration in broad world problems of finance and economics, and a renunciation of any policy of isolationism by the United States."

The Convention adopted a budget for 1944 in the amount of \$2,615,382, an increase of \$125,000 over that proposed by National Council. Provision was made for a Reconstruction Fund to rehabilitate the Church's work and property in the Philippine Islands, China, and elsewhere after the war.

The Church's ministry to the armed forces was carried on aggressively through the Army and Navy Commission under the leadership of the Bishop of Massachusetts, Henry Knox Sherrill. More than 500 Episcopal clergy serving as chaplains, and parishes near camps and training centers, were aided by the Commission. This work was financed with special funds raised annually.

The National Council through its special Committee on Work in Industrial Defense Areas aided dioceses and parishes in strategic war work areas where there was an influx of population. Everywhere the Church cooperated with other Christian bodies to avoid duplication and overlapping and to provide the most effective ministry. In a Maine shipyard, for example, Sunday services were inaugurated on a cooperative basis and the first service was conducted by the Maine diocesan chaplain for defense workers. This is believed to be the first service of its kind conducted on the eastern seaboard.

A special obligation during the war period was felt to be minority groups within the United States: Chinese, Japanese, Filipinos, Negroes, Indians, and Mexicans. The Church's ministry to Japanese-Americans was continued. Special attention was

given to resettling of Japanese released from the reception centers and to aiding promising students to continue their education under the direction of the Rt. Rev. Charles S. Reifsnider, formerly a Bishop in Japan. He also is chairman of the Protestant Church Commission for Japanese Service, an interdenominational group of authorized national representatives of the interested Christian bodies.

To deal more effectively with the Negro situation, the National Council named a Negro clergyman, the Rev. Bravid W. Harris as secretary for Negro work. Today there are 63,000 Negro communicants of our Church in the United States but by far the largest portion of these—59,000—are in cities whereas the bulk of the Negro population is in the rural sections. The next few years are strategic in relation to the whole future of the Negro race and the American scene. Race riots such as those which have occurred recently may well be avoided if the Church performs her task, a task which includes not alone evangelistic, educational, and social work with the Negro but an intensified work with our white population as well.

The General Convention took no final steps in approaches to unity with the Presbyterian Church, but urged continued study.

Under existing canons, it had been expected that the General Convention would elect a new Presiding Bishop. Instead, the canon specifying his retirement age was amended and the present Presiding Bishop, Henry St. George Tucker, was continued for another triennium. Other legislation affecting the episcopate adopted by the Convention included:

1. Within six months of election, a Presiding Bishop must resign his diocesan jurisdiction. This, Bishop Tucker did immediately and on Jan. 1, 1944, ceased to be Bishop of Virginia. He was succeeded by his coadjutor, Frederick W. Goodwin. No action was taken as to a see for the Presiding Bishop.

2. Bishops are required to resign at the age of seventy-two years.

3. Suffragan Bishops, heretofore with a seat but not vote in the House of Bishops were given a vote.

4. Missionary Districts formerly allowed Suffragan Bishops (assistants without right of succession) may now have Coadjutors (assistants with right of succession).

During 1943, the Presiding Bishop's ten-year plan, *Forward in Service*, placed special emphasis on Christian Community Service and stressed parish surveys of community resources and parish programs. Parish conferences on the Christian Vocation, the Christian Doctrine of Man, and other subjects vital to a Christian world order after the victory were also urged.

The Presiding Bishop organized a Committee on Laymen's Work under the chairmanship of Harvey S. Firestone, Jr. The purpose of the committee is to enlist the men of the Episcopal Church in the work and worship of the Church.

The Presiding Bishop's Fund for World Relief, in 1943, increasingly was the channel through which Episcopalians gave succor and support to the millions of starving, homeless, and afflicted peoples of the world—in China, Greece, Poland, Russia—wherever human beings suffered from the overwhelming catastrophe of total war. In 1943, the Fund received more than \$100,000 which it distributed through accredited relief agencies.

Other events of 1943 included the publication of a new Hymnal, and the gift by the women of the Church of the largest United Thank Offering in the more than fifty years that this offering has been established. The gift of \$1,119,878 will be used during the next three years to train, support, and care for in retirement women workers of the Episcopal Church throughout the world, provide need-

ed equipment and buildings in the mission field, and aid urgent needs created by the war.

The Dioceses of Duluth and Minnesota were merged into one diocese. The Chinese Church was granted permission to elect and to consecrate its own bishops. Formerly approval by the mother Church in England or America was required. The Episcopal Church in Japan was received into the Church of Christ in Japan. A study of the training and employment of women for work in the Church was inaugurated.

In 1943 the total number of communicants of the Episcopal Church in 7,716 parishes and missions was 1,520,394. The baptized persons numbered 2,188,573. The clergy numbered 6,344; 207 priests were ordained. In the 5,000 Church (Sunday) schools 409,087 pupils were enrolled. Baptisms during the year numbered 77,972, and confirmations 65,495. The ratio of communicants to population stood at 1 to 90 as compared with 1 to 97 a decade earlier. The government of the Church centers in a General Convention which meets triennially. The next session, the 55th, will be held in San Francisco, in October, 1946. Between sessions of the General Convention the affairs of the Church are conducted by the National Council.

The headquarters of the National Council which is the board of directors of the Domestic and Foreign Missionary Society, is in the Church Missions House, 281 Fourth Avenue, New York 10, N.Y. The official magazine is *Forth*, William E. Leidt, Editor. The president of the National Council is the Rt. Rev. Henry St. George Tucker, formerly Bishop of Virginia.

PROVO RIVER PROJECT. See **AQUEDUCTS**.

PRUSSIA. See **GERMANY** under *Area and Population*.

PSYCHIATRY. The outstanding event of the year was the symposium on military psychiatry, sponsored by the Surgeon Generals of the U.S. Army, Navy, and Public Health Service, that formed a large part of the program at the 99th annual meeting of the American Psychiatric Association. One complete issue of *The American Journal of Psychiatry* (July, 1943) was given over to this symposium, some of the salient features of which may be cited.

In his presidential address, Ruggles pointed to the need for adequate screening of inductees to eliminate the mentally unfit ("consumers of manpower rather than a strength to the army," in the words of Brigadier Rees of the British Army), and observed that hitherto relatively little had been done to promote this important measure. He estimated "that under the present procedure of induction at least 200,000 young men will be discharged from the army and navy with neuropsychiatric disabilities within the next two years." He expressed the opinion that with suitable screening at least half this number could have been eliminated in advance.

To remedy this situation, Selective Service took a decisive step: Dr. Raymond W. Waggoner was appointed psychiatric consultant and with the support of Col. Leonard Rowntree, chief of the medical division, devised a method for securing the social history (school record, occupational achievement, previous health status, personality handicaps, family health record) of registrants prior to their appearance at induction centers. This plan was put into effect in October (Selective Service System *Medical Circular No. 4*, Oct. 18, 1943) and will aid tremendously in keeping out of the armed services men "whose condition is such as positively indicates physical or mental breakdown, or failure to

adjust themselves to the responsibilities of military service after being inducted." The imperative need of such a procedure was shown in a study of 2,500 veterans of World War II returned to one State before Aug. 1, 1942. Approximately 40 per cent of these men were discharged because of mental conditions that incapacitated them for military duty. The pity is that a proper screening program was not earlier instituted.

Considerable outcry was raised against the induction of the 18 to 20 year old groups. It has been shown however that chronological age at this level is not a determining factor for either acceptance or rejection; and care has been exercised to exclude or defer for recheck youths apparently immature or unstable.

It was obvious that however good the screening at induction, not all potential psychiatric casualties could be recognized. More would become evident during early training. Under the guidance of Col. Roy D. Halloran (see this section in the 1942 YEAR BOOK), chief of the psychiatric division in the Office of the Surgeon General, mental hygiene units, each consisting of a psychiatrist, a psychologist, and a psychiatric social worker supplied by the Red Cross, were established at replacement training centers throughout the country. The function of these units is twofold—to promote mental health among recruits suitable for training and to eliminate as early as possible the mentally unfit.

The lessons of World War I had not been lost entirely; even before the new screening plan became effective, the percentage of rejections of potential misfits was considerably higher in the present war than in the former—about 7 per cent and 2 per cent respectively.

Owing to the greatly changed conditions of warfare, the ratio of neuropsychiatric casualties returning from overseas is substantially above that of the war of 1914-18.

The most critical station through which the trainee must pass on his way to a war theater is the "staging area" where troops are assembled for embarkation. In the symposium above referred to Lipschutz describes such a station with great realism. It represents a final pre-combat test of the stamina of the soldier; the psychiatric casualties seen here constitute an index of the effectiveness of the earlier weeding out process. As might be expected, services in which men must be more rigidly selected for their superior personal qualities—air force, paratroops—present much fewer neurotic reactions than the army in the staging area.

The exceptional stresses to which airmen are subjected and the consequent psychiatric reactions are discussed by Kellum. Such casualties may be due mainly to predisposition (just as there are accident-prone machine operators and motor car drivers in civil life), or to the effects of excessive stress and fatigue on normal personalities. Predisposed men are likely to be eliminated early in combat operations "either by enemy action or admission to the sick list."

The desirability of avoiding diagnostic clichés, especially for cases of temporary disability under extraordinary stress, is particularly emphasized (cf. the misnomer "shell shock" in the last war).

The extreme psychiatric consequence of war reported to date was observed in the U.S. Marine Corps during the terrible days and nights of August, 1942, at Guadalcanal. Rogers Smith reporting a study of casualties from this area admitted to the U.S. Naval Hospital at Mare Island, California, expresses the belief "that never before in history has such a group of healthy, toughened,

well-trained men been subjected to such conditions. . . . The strain and stress experienced by these men produced a group neurosis that has not been seen before and may never be seen again." The "neurosis" in these cases gave evidence, if such were needed, that the strongest man has his breaking-point. The nervous manifestations were simply part of "a disturbance of the whole organism—a disorder of thinking and living—or even wanting to live," brought on by the sheer weight of the ordeal of enduring without sleep and fighting against what seemed for weeks like insurmountable odds, despairing of relief or of leaving the island alive. Fear born of hopelessness, aching fatigue, downright physical exhaustion with loss of weight up to 45 pounds, tropical infections, all took their toll. The clinical picture was strikingly similar in men of all types of constitution, physical and mental, thus discounting any significant endogenic factor. Headache, sensory irritability, amnesias, sensori-somatic complaints, muscular hypertension, tremors, functional palsies, explosive emotionalism, panic states, fears of being regarded as cowards—such were the regularly observed symptoms in hardened warriors who had been subjected to intense, unrelenting, and prolonged stress of combat under conditions as unfavorable, physiologically and psychologically, as could well be imagined.

In contrast to this picture in which the wearing-down effect of time is so important, consider the reactions of men to great stress in sudden, brief crisis. Commander Hogan of the aircraft carrier *Wasp*, torpedoed as she was escorting the first reinforcements to the marines in that memorable first offensive in the Pacific war at Guadalcanal, describes these reactions. Following two terrific blasts as the torpedoes struck, a sheet of flame shot up the side of the ship and, augmented by ignited gasoline, enveloped men and guns. The sweep of fire and exploding ammunition spread death and destruction. "Each blast would send men, missiles and planks hurtling through the air. An ensign standing on the flight deck was sent blasted through the air, landing 60 feet away and 30 feet up and on the bridge structure. He suffered a fractured leg, severe intracranial injury and was unconscious for 10 days. He is now back on duty. . . . In a V-shaped area from the site of the torpedo hits to the hangar deck, covering four decks, every one was killed. Men on the edge of the arms of the V were seriously injured. I saw no panic and there were no reports of any. During the first few moments there was some confusion. The communication and water systems had been destroyed; men isolated were at first perplexed as to what they should do. The saving of the ship was uppermost in every one's thoughts. . . . The officers and men who were not injured worked with no evidence of unusual excitement. . . . Those who could not be of service herded together reclining on the stern of the flight deck, quiet and watching silently the spread of the fire and the destruction of the ship. Although they realized that they were directly over the fully loaded torpedo planes which might explode at any time, there was no panic or hysterical behavior. When the word 'all hands abandon ship' was passed, they went over the side in an orderly fashion. . . . And in all this only two minor neuropsychiatric cases developed. . . . We should pay tribute to those 18–19–20 year old men who are winning the war and remaining stable."

We have thus two contrasting situations of great stress to which men of like fiber, training, and staunchness were exposed, with correspondingly

contrasting results. In the first, the cumulative effects of continuing, overwhelming adverse conditions which must be borne night and day, like dragging a lengthening chain, became evident in holistic reactions that included symptoms akin to those of extremely severe fear- or anxiety-neurosis. In the second, stress certainly no less intense and terrifying, but sudden and of brief duration, produced practically no psychiatric casualties.

On the basis of three years' experience as consultant in psychiatry to the British Army, Brig. J. R. Rees (*Brit. Med. J.*, Jan. 2, 1943) describes procedures which can be carried over into peace time with no less valuable results than in war time.

Especially important were the measures adopted for handling certain of the higher grades of mental deficiency, the "one-job" men of low learning capacity but emotionally stable. These men have given splendid service in various occupations in the unarmed labor sections, relieving men of superior mentality for other work, "and in many cases doing the jobs very much better than they are naturally done by the more intelligent type of individual. . . . Disciplinary troubles are almost entirely absent, and these units provide a striking indication of what can be done in the way of employment of a group in society which in prewar years had certainly been a problem from many angles."

Another noteworthy procedure adopted by the British Army in July, 1942, after considerable preliminary experimentation, was that of general personnel selection involving all ranks. This was nothing less than a complete job-analysis of the multitudinous army activities, establishing intelligence and aptitude standards necessary for each job and thus making possible the correct posting of men to the several types of unit. The consequent vastly improved utilization of manpower "has set a standard which will certainly be applied in industry and in social life in the post-war world. The matching of men to suitable work is as valuable a means of psychiatric prophylaxis as anything that could well be devised." In this mass selection of men psychiatry and industrial psychology collaborate in interdependent teamwork; as they also do in the personality and character studies for officer selection—a procedure requiring two days of observation and study of candidates to determine the branch of the service for which each officer is best fitted.

In citing these measures adopted by the British Army, it should be added that procedures having the same objects in view have also been worked out in both the American and Canadian Armies; and the same is true of the German Army. Indeed the combined services of psychiatrists and psychologists in a program of personnel selection have come to play an indispensable part in the building up and morale maintenance of a modern army.

A memorable event was the visit in November to the United States and Canada of the two British psychiatrists mainly responsible for organizing in the United Kingdom the procedures mentioned above—Brig. J. R. Rees and Lt. Col. G. R. Hargreaves. These officers conferred with the ranking army psychiatrists in Washington and Ottawa and, accompanied by representatives from both headquarters, visited training centers in the two countries. These conferences, bringing together the military authorities in the three English-speaking nations in this branch of war medicine, were

significant not alone for the value of information exchanged, but no less from the very fact that they took place.

The literature of war psychiatry is enormous. Many of the more important articles and books will be found reviewed in the *Hartford Abstracts* issued from the science library of the Institute of Living at Hartford, Conn.

In the editorial opinion of the *Journal of the American Medical Association* (Apr. 3, 1943), "the development of the neuropsychiatric branch of the U.S. Army Medical Department represents one of the most important achievements in the advancement of military medical science." Comparing the two World Wars the *Journal A.M.A.* notes that the number of neuropsychiatric rejectees at induction in 1918 was 20 per 1,000 registrants, whereas in 1942 the ratio was 75 per 1,000. The difference may be explained partly by the "increase" in mental disability in the community as shown by hospital admissions over long periods.

Prevalence of Mental Illness. A statistical estimate of this increase, based on first admissions to hospitals in New York State was undertaken by Malzberg (*Psychiat. Quart.* July, 1943). He found that in 20 years, 1920-40, the average number of annual first admissions increased by 89.4 per cent, while the population of the state during the same period increased by 29.6 per cent. The greater average longevity of the general population accounts for some of the increase. Thus there is a greater amount of mental illness associated with later life, notably that due to arteriosclerosis (21:100000 general population in 1920; 66:100000 in 1940). Making allowance for all the factors that tend to confuse statistics, such as longevity, population increase, improved diagnostic and hospital facilities, and better popular attitude toward psychiatric disabilities, there still seems to be a slow increase in mental illness associated with the mounting stresses and complexities of our mechanized society.

A view at least temporarily somewhat more favorable is expressed by Hopkins (*Brit. Med. Jour.* Mar. 20, 1943) who reports a decrease in admission rates of mental cases during wartime. In the psychiatric observation wards of the Liverpool Municipal Hospital, serving a population above a million, he finds that during the five-year period from 1937 to 1942 the number of patients admitted dropped from 1,133 to 695; the number of cases of attempted suicide fell from 129 to 65. The milder and transient cases which formerly had received hospital care were year by year less in evidence after the outbreak of war. Hopkins suggests that the apparently reduced incidence of mental disorder may be actually a result of wartime conditions, such as increased opportunity for employment, lessened consciousness of individual isolation and strengthening of the community spirit.

Research. An encouraging sign is the vigorous research activity, continuing in many centers, dealing with the nature, causes, and treatment of mental diseases. A review of these activities will be found in "Research in Mental Hospitals—Study No. 2," issued by the National Committee for Mental Hygiene (1942).

Psychosomatic. There is increasing attention on the part of the medical profession generally to psychosomatic problems and relationships (see 1943 YEAR BOOK). Bauer (v. *Brit. Med. Jour.* ed. Apr. 24, 1943) pointing out that all medicine is psychosomatic and that psychotherapy is a necessary element in all treatment, calls for utmost care in

distinguishing between psychological and physical factors in causing illness. Assigning undue importance to somatic findings in an illness that is mainly psychogenic is likely to aggravate the condition. "Watch your word" is a maxim no physician can safely disregard. The "word" may be either a therapeutic or pathogenic agent.

Sands (*B.M.J.* May 22, 1943) discusses the treatment of psychiatric cases in the wards of the general hospital. He found that 20 per cent of the cases on the medical wards were primarily neuropsychiatric, regardless of the initial complaint for which they were admitted.

In a study of cases in army hospitals diagnosed as arthritis or allied organic conditions, Boland and Corr (*Jour. A.M.A.*, Nov. 27, 1943) considered that approximately one-third were "incapacitated because of psychic difficulties." Detailed investigation of 50 such cases of "psychogenic rheumatism" showed no present evidence of muscle or joint disease in 32 and minor nondisabling changes in the remainder. Forty-six of the 50 had definite psychoneurotic symptoms associated with the rheumatism. Mainly because of the neurotic component the majority of these men were unsuited to military service.

Obermayer (*Jour. A.M.A.* July 24, 1943) calls attention to the functional or psychological factors in some of the common dermatoses, often referred to as allergic conditions. For example, a food, the ingestion of which is regularly followed by urticaria whilst the patient is at home, may have no such consequence when he is enjoying himself on a vacation. Allergy is a link between the "organic" and "functional," or presents a synthesis of the two.

Asthma offers strikingly the picture of a psychosomatic disorder. Sir Arthur Hurst, who did such splendid work with the war neuroses of 1914-18 (Seale Hayne Studies) describes (*B.M.J.* Apr. 3, 1943) the combined physical and psychological aspects of the asthma diathesis, "a congenital and often inherited constitutional abnormality . . . which manifests itself in a special type of personality." The "diathesis" is the *conditio sine qua non*. The asthmatic attack may be in one case an allergic response, in another due entirely to reflex or psychical stimuli. In the latter case the attack may assume the character of a conditioned reflex. Certain uncomfortable emotional states may bring on the asthmatic spasm. Hurst, with 48 years experience of asthma, regards the "asthma cures" of to-day and of many a yesterday as "nothing more than gross suggestion." He stresses the mental hygiene element in treatment.

The association of peptic ulcer with anxiety states has long been recognized. Thomas (*Southern Med. Jour.* April, 1943) found that 25 of 47 soldiers with peptic ulcer were also suffering from anxiety neurosis and responded poorly to treatment. In his opinion an "anxiety state incident to induction into the army appeared to be a ruling factor."

The psychological-physiological relationships in these cases have been the subject of illuminating experimental work by Wolff (*Science*, Dec. 3, 1943) upon a patient with a gastric fistula through which, because of a scar-occluded esophagus, he had fed himself since childhood. It was possible to observe changes in gastric function associated with painful emotional states: with fear or sadness there was pallor of the mucosa, decreased acid production and decreased motility; with feelings of hostility, resentment, or anxiety occurred hyperemia of the gastric mucosa, marked increase

in acidity and muscular contractions. Moreover in the latter condition, vigorous contractions of the stomach walls were often sufficient to cause pain and also minute hemorrhages in the mucosa. It was further found that if a small erosion experimentally produced was kept bathed in gastric juice, further acceleration in acid production took place, and this in turn increased the tissue damage. Thus a vicious circle is established and peptic ulcer may result. The difference between hyperacidity and actual gastritis is therefore one of degree; and consequent upon continued or recurring emotional states of the types mentioned structural changes may occur which lead to chronic ulceration.

Among the new books presenting the psychosomatic viewpoint may be mentioned Alvarez, *Nervousness, Indigestion and Pain*, and Dunbar, *Psychosomatic Diagnosis*.

Shock Therapy. The shock therapies continue to find favor. One of the unfortunate features, so common with any new treatment that has achieved a certain vogue, is the popular demand. Pressure is brought to bear upon psychiatrists to use these methods in all sorts of conditions for which they may be entirely unsuited. Insulin remains the preferred method in cases diagnosed "schizophrenia"; electroshock in the so-called affective disorders, including "involutional melancholia." Malzberg (*Psychiat. Quart.* January, 1943) reviews 491 electroshock-treated cases of dementia praecox (a term often used interchangeably with schizophrenia) in New York state hospitals and finds the results better than in cases treated with metrazol but inferior to those following insulin therapy. He confirms the efficacy of electroshock in manic-depressive cases and involutional depressions. The present status of the shock therapies is well summed up by Lewis (*Bull. N.Y. Acad. Med.* April, 1943) who sounds a timely note of caution in evaluating results. He points to the uncertainties both in the diagnosis of schizophrenia and in the criteria of recovery. He conservatively states: "Possibly the shock methods should be used only as adjuncts in a total therapeutic approach, including psychotherapeutic interviews with the physician, physiotherapy, occupational therapy, physical education, and a program to promote socialization."

In view of the present prominence of the electroshock method it should be mentioned that the types of apparatus most commonly in use frequently produce changes in the electroencephalogram (delta waves) such as are met with in organic pathology, and therefore may not be wholly innocuous. With a modified apparatus described by Friedman and Wilcox (*Jour. Nerv. and Ment. Disease* 96:56:1942), which gives comparable clinical results with much weaker current, Proctor (*Amer. J. Psychiat.* January, 1943) reports greatly decreased cerebral dysrhythmia as indicated by markedly less delta wave formation. The advantages of the modified apparatus seem to be established.

Prefrontal Leucotomy. The brain operation, bilateral prefrontal leucotomy, for certain severe, long-continuing, and intractable mental disorders is coming into quite general use. It was first introduced in 1936. Ziegler (*Amer. J. Psychiat.* September, 1943) surveys 19 clinics in the United States and Canada in which this operation is being done and has collected 618 cases to July, 1943. According to his report 518, or 83 per cent of the number of cases observed, showed either full recovery or definite improvement, as follows:

Recovered (psychotic or neurotic symptoms disappeared)	215
Improved in varying degrees	303
Unimproved	62
Worse after operation	8
Died as result of or subsequent to operation	30
	618

Frontal leucotomy is a drastic treatment for desperate cases which, as the *Journal of the American Medical Association* (Oct. 16, 1943) remarks editorially "would appear to be beneficial in some types of psychotic patients in whom all other methods of treatment have failed and where chances of remission or recovery are remote."

In a symposium of the Royal Medico-Psychological Association on this form of surgical treatment, reported in the *Journal of Mental Science* (April, 1943) the same general conclusion was reached.

Alcohol. In connection with studies on alcohol and alcoholism it is worthy of note that Dewan (*Am. J. Psychiat.* January, 1943) has demonstrated the presence of an alcohol oxidation mechanism in the brain of several animal species, and it may be assumed that a similar mechanism exists in man. The ability of the brain to oxidize alcohol had not previously been established. This finding is therefore of considerable moment and Dewan suggests that the oxidizing enzyme system demonstrated "may function as a detoxicating or protective device when alcohol is used in narcotic concentrations"; and further "that the central nervous system is more versatile chemically than has hitherto been thought."

See PUBLIC HEALTH SERVICE; ROCKEFELLER FOUNDATION.

CLARENCE B. FARRAR.

PSYCHOLOGICAL WARFARE. See STATE, U.S. DEPARTMENT OF. Compare PROPAGANDA.

PSYCHOLOGY. Tests. To conserve manpower and expedite training, the Armed Forces give psychological tests at every stage of the classification process, which continues throughout each man's military career. New psychometric tests of all kinds have been devised to meet emergency needs, and psychologists have collected psychometric data on an unprecedented scale and evaluated them in the light of subsequent performance.

Sensation. There is growing recognition of the military importance of the special senses. W. R. Miles finds that red goggles produce dark adaptation in a lighted room. Soviet physiologists have developed methods for expediting dark adaptation so as to secure maximum sensitivity in five to six minutes. K. Kekcheyev, N. Derzhavin, and S. Pilipchuk find that the sensitivity of an eye already maximally dark-adapted can be increased by suitable stimulation of other sense organs. H. Cadan has successfully treated color blindness with vitamins, tincture of iodine, and electrical stimulation. M. L. Johnson's histological studies of the retinas of rats suffering from severe Vitamin A deficiency show that degeneration begins in the visual cells. A remarkable degree of repair is observable after 24 hours of Vitamin A therapy, and practically complete recovery after three to four weeks of therapy. According to E. Gellhorn and H. Hailman, lowering of the oxygen tension impairs the function of the sense organs, largely through its effect on the synaptic nervous system of retina and brain. From experiments with oxygen deprivation on psychotic subjects, however, S. M. Horvath, D. B. Dill, and W. Corwin con-

clude that no permanent ill-effects from anoxia would be caused even by a parachute descent from 31,000 feet altitude. D. H. Russell finds evidence that poor reading habits may cause certain visual defects.

Psychology and Aviation. Rapid expansion of the air force has necessitated reduction of the formal educational requirement. In its place, screening tests are used, at least six of which are psychomotor. A group of aviation physiologists (Ph.D.'s) has been developed. Many of their investigations are in part psychological. J. E. Dougherty has discovered that excessive increases in the flying time of aviation instructors results in diminution of alertness, increased irritability toward everyone, and loss of interest in the students' progress. H. J. Rubin finds the most important causes of air sickness psychological. L. D. Carson, W. R. Miles, and S. S. Stevens have proposed changes in aeronautical design to decrease hindrances to the visual and auditory functioning of flight personnel. Among new books are *Flying Men and Medicine: The Effects of Flying Upon the Human Body* by E. O. Barr (Funk & Wagnalls) and *Effects of Flight: Mental and Physical* (McGraw-Hill).

Psychology of Military Leadership. P. S. Madigan and M. J. Farrell point out that military discipline is a problem in readjustments. Genuine discipline, military or other, is based not on imposition of authority but on teamwork. Americans quickly adapt to military discipline thus interpreted. Psychologists have found that enlisted men associate with good leadership the following characteristics: (1) competence, (2) interest in the soldiers' welfare, (3) promptness in making decisions, (4) ability to instruct, (5) good judgment, (6) absence of undue display of authority, (7) tendency to commend good work, (8) physical strength and build, (9) "good education," "sense of humor," and "guts," (10) impartiality, (11) industry, (12) ability to give clear-cut, understandable orders. Selection of leaders depends in part upon giving leadership a chance to emerge and then having competent men judge whether it has appeared. Among new books are *Personal Leadership for Combat Officers: Objectives and Methods for Leaders of Tactical Elements, Combat Teams and Fire Units* by P. B. Reed (Whittlesey, McGraw-Hill); *The Psychology of Military Leadership* by L. A. Pennington, R. B. Hough, Jr., and H. W. Case (Prentice-Hall); and *Selection of Officer Candidates* by W. L. Woods, L. Brouha, and C. C. Selzer (Harvard). The Subcommittee on a Textbook of Military Psychology has been popularizing relevant psychological knowledge in a vigorous, practical style, free from the obvious parade of academic learning.

Industrial Psychology. *Wartime Supervision of Workers* by R. S. Schultz (Harpers) reports results of a nationwide survey on human factors in production. As C. F. McPeak points out, it is to the advantage of both employees and management to see that the worker has his needs for affection, independence, security, social approval, and self-esteem satisfied in order to avoid tensions which will interfere with his working efficiency. At the inaugural meeting of the American Society for Research in Psychosomatic Problems, there was a symposium on fatigue by H. Davis, W. H. Forbes, S. A. Portis, S. H. Bartley, and W. R. Miles. Bartley emphasized conflict and frustration as basic to the fatigue condition. C. Babbitts points out certain paradoxes in time and motion studies, and recommends that workers in this field take more account of rhythm, ballistics, and momentum of

the whole body. In treating fatigue, M. B. Gerson recommends prompt and unimpeded excretory activity and a diet high in potassium salts and low in fat and protein. Among new books is *An Introduction to Industrial Psychology* by M. Smith (London: Cassell).

Psychodietetics. This is the psychological study of food in relationship to mental processes. Among its many aspects are the causation of mental disorders by improper feeding, inadequate nutrition due to food fads, abnormal attitudes and bad eating habits, and the application of educational psychology to nutritional problems. M. Mead is Chairman of the Committee on Food Habits of the National Research Council, which has been applying comparative anthropology and experimental psychology to the problem of changing food habits, to preserve nutritional standards in spite of wartime shortages. This committee has developed tests to be used with school children in different parts of the country to reveal food ideologies of different age levels and different economic, occupational, religious, and national groups. Among longtime researches now in progress are H. Bruch's study of psychosomatic mechanisms in obesity and allergy in childhood, and K. Lewin's study of the influence of different containers on food habits.

Rehabilitation of the War Injured. In the Medical Corps, the psychologists' duties often include the securing of case histories, assisting with EEG studies, classification, examination of mental status, supervision of occupational and recreational therapy, and preparation of case summaries for staff diagnosis. Acute emotional disturbances in torpedoed seamen of the Merchant Marine have been studied by S. Margolin, L. S. Kubie, M. Kanzer, and L. Stone. Almost every tropical disease has neuropsychiatric sequelae, according to J. L. McCartney. D. Denny-Brown states that all war head injuries show a peculiar mixture of trauma and emotional shock, and both must be considered in treatment. F. Fromm-Reichmann reports that a surprising observation during air raids in England was the immediate cure of acute emotional disturbances, partly because the victims' rage was an overt shared reaction and partly because of a changed cultural attitude toward the frank expression of anxiety, rage, and fear. Results of civilian emergency psychotherapy have been better than those of military psychiatry because the authoritarian military situation tends to prevent a spontaneous interrelationship and frank expression. D. Denny-Brown reports that shell shock is as frequent in this war as in the last, although the avoidance of the term and treatment as a neurosis have greatly reduced persistent disability. Some chronic neurotics are rejuvenated by disturbances of routine and the development of the herd instinct. According to C. A. Flood, peptic ulcer in soldiers constitutes an unplanned experiment which indicates that anxiety is the basic cause of chronic peptic ulcer. C. S. Sommer and J. Weinberg point out the harm that may be done by stigmatizing language used in military discharge certificates. D. A. Thom points out that many men who went through the active phases of the previous world war successfully developed neuroses during demobilization and the economic depression following it. He contends that many neuroses were created by pushing veterans into occupational training courses beyond their abilities. D. Ross stresses the desirability of continuing the patient in work similar to his previous occupation. *Rehabilitation of the War Injured* edited

by W. B. Doherty and D. D. Runes (New York: Philosophical Library) is largely a symposium of republished articles.

Mental Hygiene. According to E. Lerner, we must develop preventive mental hygiene on a world-wide scale. To this end he believes autocratic power relationships should be curbed throughout the life span and every individual given more secure freedom, privacy, self-reliance, status, self-respect, and opportunity for team spirit. R. L. Jenkins contends that real mental hygiene will be impossible as long as psychiatrists cling rigidly to a craft-union philosophy. B. Malzberg contends that the problem of mental disease must be met by social rather than medical means. "The mental reactions which make an individual atypical in one culture may fit him perfectly for another," as H. G. Canady points out. G. L. Mosby stresses the importance of viewing all therapy for psychotic patients as directed toward resocialization. A. Gralnick finds evidence that "mental illness is man's active response to markedly disturbed human relationships, and that in psychosis, sociogenesis rather than biogenesis is primary. R. deM. Kepner presents evidence of direct contagion of manic-depressive psychosis in three cases. In *Release from Nervous Tension* (Simon & Schuster), D. H. Fink contends that neurotic behavior is the result of conditioning. J. L. Halliday points out the high prevalence of neuroticism among British miners just prior to the war, because of chronic emotional tension. Now the growth of employment and wage stabilization have alleviated frustrating socio-economic factors, rationing has created a new sense of equality, and the struggle to win the war has made life meaningful again. According to E. F. Skinner, fear is the basic emotion in every psychoneurosis.

In *Behavior and Neurosis: An Experimental Psychoanalytic Approach to Psychobiological Principles* (Chicago U.), J. J. Masserman reports that interposing a barrier between an animal (cat or dog) and food results in extinction of striving but not in experimental neurosis, but that the latter appears when the animal is subjected to conflict between hunger and fear. S. Cobb criticizes the term psychoneurosis on the ground that it confuses two very different large groups, the under-reactors and the over-reactors, each of which includes several clinically significant subdivisions. Persons in some of these groups are almost always useless for military purposes; those in others make good officers and soldiers.

S. H. Kraines points out that therapy for stress may be accomplished simply by changing the situation, and therapy of attitudes by relieving the original cause of the attitude. He suggests that the most effective social therapy is satisfying work. N. Cameron believes that paranoid thinking is due to defective socialization, the paranoid interpreting the behavior of others largely in terms of his own preoccupations. E. Weiss points out that anxiety is diminished and blood pressure lowered when inhibited aggression (chronic rage) can be turned outward. According to C. R. Rogers, the skilled therapist no longer tries to reform his client but merely to reveal the client to himself, thus facilitating the choice of more appropriate goals. The therapist should not suggest goals or actions. In *An Introduction to Group Therapy* (Commonwealth Fund), S. R. Slavon views the main task of therapy as removal of the patient's resistance to people who may influence him in a socially desirable direction, and to this end he recommends a permissive environment and activ-

ity catharsis. Among other enthusiastic advocates of group psychotherapy are D. Blair, A. Hauptman, and G. W. Thomas.

Contemporary Psychopathology edited by S. S. Tomkins (Harvard) is designed primarily as a source book. *Introduction to Psychiatry* by W. E. Biddle and M. Van Sickle (Philadelphia: Saunders) is a comprehensive guide for the nurse. *Mind, Medicine, and Man* by G. Zilboorg (Harcourt, Brace) is written for the layman. Among other new books are *Managing Your Mind: You Can Change Human Nature* by S. H. Kraines and E. S. Thetford (Macmillan); *Relaxation* by J. L. Rathbone (T. C., Columbia); *Hypnotism* by G. H. Estabrooks (Dutton); *Psychosomatic Medicine* by E. Weiss and O. S. English (Philadelphia: Saunders); and *Survey of Objective Studies of Psychoanalytic Concepts* by R. R. Sears (Social Science Research Council).

Social Psychology. According to G. Hartmann, the chief postwar task of psychologists will be to aid in erasing animosities, to convert the victory into social benefit. Psychologists are already helping to clarify our understanding of other peoples and point out how changes can be made acceptable to them, as well as to discover directions in which our own people can be led. E. C. Tolman contends that war can be overcome only when individuals identify themselves with supra-national groups more strongly than with mutually exclusive, competing national groups. R. Stagner views peace planning as a problem in the psychology of learning. He believes that in the long run rewards will be more effective than punishment in breaking down hostile nationalistic habits and building up cooperative international habits. Cooperative victories should be stressed rather than national victories, and postwar plans should be clarified now, to encourage ego-identification of weak groups with a powerful international group.

C. Bühler points out that Germans have always valued abstract ideals above human feelings. According to K. Bode, postwar resentment of defeat in Germany could be minimized by a labor-socialist government there. K. Lewin contends that a change toward democracy is not a political matter but involves a complete change in values, family, and group life. He feels that if the form of government is left to the people of war-torn Europe, power groups will impose autocracy, but that cultural changes in the direction of democracy may be introduced gradually by a hierarchy of democratic leaders training democratic sub-leaders through feeding and reconstruction work.

Among new books are *A Social Psychology of War and Peace* by M. A. May, Director of the Institute of Human Relations (Yale); *The Psychology of Fascism* by P. Nathan (London: Faber and Faber); *The Goebbels Experiment: A Study of the Nazi Propaganda Machine* by D. Singleton and A. Weidenfeld (Yale); *Is Germany Incurable* by R. M. Brickner (Philadelphia: Lippincott); *Sociocultural Causality, Space, Time: A Study of Referential Principles of Sociology and Social Science* by P. A. Sorokin (Durham: Duke U.); *Sociology: Principles and Problems* by C. A. Ellwood (American Book); *The Family and Democratic Society* by J. K. Folsom (Wiley); *Ballots and the Democratic Class Struggle: A Study in the Background of Political Education* by D. Anderson and P. E. Davidson (Stanford U.); and *New Horizons in Criminology: The American Crime Problem* by H. E. Barnes and H. K. Teeters (Prentice-Hall). *War Over West Ham: A Report Prepared for the Fabian Society and the Ethical Union* by E. D.

Idle (London: Faber and Faber) describes the effects of the blitz on health, education, recreation, etc., in a London area. *The Structure of Morale* by J. T. MacCurdy (Macmillan) is a study of the wartime morale of our allies and enemies. *Personal Problems and Morale* by J. B. Geisel (Boston: Houghton, Mifflin) is a textbook for high school.

Racial Studies. Several psychologists are studying causes and possible ameliorations of racial conflicts in the United States. *Intercultural Education in American Schools* by W. E. Vickery and S. G. Cole (Harper) is the first of a series of teachers' manuals designed to improve race and culture group relations in the United States. From studies of Negro children with Binet IQ above 160, M. D. Jenkins concludes that Negroes are as variable as other racial groups, but that society commonly limits the development of gifted Negro children by failure to recognize them and grant them suitable education. P. Witty and V. Theman have made a follow-up study of the educational attainment of gifted Negroes with IQ's ranging from 120 to 200, and find that they compare favorably with whites; they report the case of one Negro boy who received his Ph.D. at 18. H. G. Canady calls attention to the unfairness of testing Negroes by tests standardized on Northern whites. R. C. Woods and L. R. Martin of West Virginia find Negroes superior to whites in musical ability. S. A. Beckman has studied art aptitude of superior Negro children. T. M. Abel reports that among institutionalized subnormal girls, Negroes dominated whites about twice as frequently as whites dominated Negroes. L. L. Holman views the Negro's supremacy over whites in various athletic competitions as an effort to compensate for feelings of inferiority. R. W. Russell, testing Zuni children with the Goodenough Draw-a-Man Tests, finds no inferiority of the Zuni to white norms. P. A. Cowan, after testing Indians in New York State, concludes that they would compare favorably with whites if they had the same environmental advantages. G. M. Stratton and F. M. Henry have compared physiological reactions to an emotional stimulus in Chinese, Japanese, and whites.

Educational Psychology. "The possibilities for human development through educative means are far greater than our ancestors supposed." This is the thesis of G. D. Stoddard in *The Meaning of Intelligence* (Macmillan). R. Allers points out that problem teachers commit two fallacies, first allowing their opinion of the child to be influenced by his background and second assuming that objectionable actions are indicative of an evil disposition. In a study of classroom disturbances of eighth grade boys and girls, M. L. Hayes found that the purpose of the disturbing behavior was usually relief from frustration. R. P. Fischer reports an experimental investigation of the role of frustration in academic underachievement. C. Pope reports a study in which all boys and girls in a high school were asked to write an unsigned essay on personal problems; 46 per cent were in the study-learning area, with teacher-pupil relationships of greatest concern. E. Sylvester and M. S. Kunst find evidence that reading difficulties are disturbances of the exploratory function. They attribute the success of some tutoring not to pedagogical methods but to the fact that the tutor has intuitively met some emotional need of the child.

Among new books are *Vocational Education* edited by N. B. Henry (Yearb. Nat. Soc. Stud.

Educ.); *Educational Measurement and Evaluation* by H. H. Remmers and N. L. Gage (Harper); *Measurement and Evaluation in the Secondary School* by H. A. Green, A. N. Jorgensen, and J. R. Gerberich (Longmans, Green); *Remedial Techniques in Basic School Subjects* by G. M. Fernald (McGraw-Hill); *Policies and Practices in the Improvement of Reading* edited by J. J. DeBoer (National Council of Teachers of English); and *Study Guidance: A Diagnostic Practise Book of the Principles of Learning and of Study Methods* by A. E. McNelly (Chicago: Lyons & Carnahan).

Child Psychology. *The Encyclopedia of Child Guidance* edited by R. B. Winn (Philosophical Library) includes over 200 articles by more than 70 authorities.

In *Child Behavior and Development: A Course of Representative Studies* edited by R. G. Barker, J. S. Kounin, and H. F. Wright (McGraw-Hill), 42 original investigators present their work. That problems of behavior may be studied through analysis of the situations to which the behavior is a response is the central thesis of *Family Situations: An Introduction to the Study of Child Behavior* by J. H. S. Bossard and E. S. Boll (Philadelphia: Penn. U.). M. W. Henke and R. G. Kuhen find that a majority of boys in a summer camp gained in social adjustment but that most of the underprivileged lost. They conclude that boys of low socio-economic status are harmed rather than helped psychologically by being thrown with boys of average or superior status. Studying the effects of air raids on school children, A. G. McClure concludes that symptoms are due not so much to the raids themselves as to disturbed routine, absence of parents from home, and group psychological contagion. Increase in activity and violence were more common than withdrawal. D. Denny-Brown reports that children up to three and four years apparently do not realize what is happening during a bombing; children of six to twelve develop neurotic symptoms but these subside quickly.

As the Child Grows by H. B. Pryor (New York: Silver Burdett) emphasizes individual variation, particularly structural. The importance of recognizing and respecting individuality is stressed by A. Gesell, F. L. Ilg, J. Learned, and L. B. Ames in *Infant and Child in the Culture of Today: The Guidance of Development in Home and Nursery School* (Harper). H. L. Reingold finds that babies who have been raised as only babies in a boarding home do better on tests such as the Gesell than babies who have shared a boarding home with others. S. Q. Janus finds evidence that early language at all ages from 18 to 66 months is devoted more to social manipulation than to egocentric remarks. *The Neuromuscular Maturation of the Human Infant* by M. B. McGraw (Columbia) correlates behavioral data with neurological data and draws educational conclusions from experimental studies. *Children Can Help Themselves: The Normal Child's Health Behavior* by M. O. Lerrigo (Macmillan) is intended for parents.

Books of General Interest. *Psychology Through Literature* edited by C. Shrodes, J. Van Gundy, and R. W. Husband (New York: Oxford) illustrates psychological principles through selections from the world's great literature. *Psychology and Human Living* by W. C. Langer (Appleton-Century), written for the Commission on Human Relations of the Progressive Education Association, approaches human behavior from the standpoint of needs. *The Expression of Personality: Expert-*

mental Depth Psychology by W. Wolff (New York: Harper) is a report of experiments in progress since 1925 on the problem of personality dynamics. *Principles of Behavior* by C. L. Hull (Appleton-Century) is designed to serve as a text in advanced courses. *Psychology You Can Use* by W. H. Roberts (Harcourt, Brace) is for the lay reader. *Chimpanzees: A Laboratory Colony* by R. M. Yerkes (Yale) is intended both for the layman and the specialist. Among other new books are *Lewin's Topological and Vector Psychology* by R. M. Leeper (Eugene: Oregon U.); *Emotion in Man and Animal* by P. T. Young (Wiley); and *Autonomic Regulations: Their Significance for Physiology Psychology and Neuropsychiatry* (New York: Interscience). See JUVENILE DELINQUENCY.

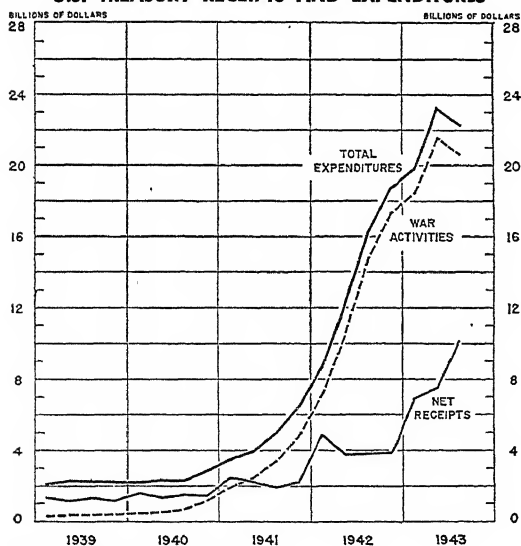
MABEL F. MARTIN.

PUBLIC ASSISTANCE PROGRAMS. See SOCIAL SECURITY BOARD.

PUBLIC BUILDINGS ADMINISTRATION (PBA). An agency of the U.S. Government under the jurisdiction of the Federal Works Agency. It is responsible for the administrative, technical, and clerical functions incident to the design, construction, maintenance, and repair of Federal buildings. The Section of Fine Arts, formerly charged with the selection and placing of designs in public buildings and the employment of sculptors and artists, was discontinued, July 1. (See ART.) The Emergency Operations Unit builds Federally constructed schools, hospitals, and health buildings under the War Public Works Program. Commissioner in 1943: W. E. Reynolds.

PUBLIC FINANCE. The year 1943 witnessed the culmination of the American war effort in World War II so far as Treasury finance was concerned. Government spending reached a peak during the fourth quarter, showing a slightly declining trend.

U.S. TREASURY RECEIPTS AND EXPENDITURES



Federal Reserve Bulletin

ency at the year end. Cutbacks and cancellations of thousands of war contracts made it probable that this peak would not be exceeded again even if the war continued for some time, despite the fact that aircraft production and shipbuilding were still being expanded at the end of the year. Furthermore, mounting Government receipts made it virtually certain that, regardless of further

changes in the monthly rate of Federal spending, the excess of expenditures over income had certainly passed its peak.

Federal expenditures during the fiscal year ended June 30, 1943, reached the unprecedented total of \$78,179,000,000, or almost two and one-half times the amount spent during the first year of American participation in World War II. War activities accounted for all but \$6,070,000,000 of these outlays, and the rate of military expenditure was rising sharply at the end of the 1943 fiscal year. Director of the Budget Harold D. Smith stated near the end of the year that budget expenditures for war activities would reach \$89,000,000,000 in the fiscal year ending June 30, 1944, or almost \$7,500,000,000 monthly. This high rate of expenditure was, however, somewhat below the original budget estimate that \$97,000,000,000 would be required for war activities in the 1944 fiscal year, so that the indicated deficit was reduced materially from the President's estimates.

Revenues collected by the Federal Government in the fiscal year ended June 30, 1943, aggregated \$22,282,000,000, almost twice as large as the year before and more than three times as large as the revenue collections in 1920, the peak for the World War I period. These revenue collections, it will be noted, were less than 28 per cent of Federal expenditures, as contrasted with the avowed policy of the Treasury that 50 per cent of Federal outlays were to be derived from taxes. In part, however, the wide discrepancy between the Treasury's objective and its actual accomplishment reflected the time lag before the new taxes authorized by the Revenue Act of 1942 could become fully productive.

The problem of staving off the threat of inflation in the face of such large Federal outlays, much less than half of which were covered by tax receipts, was a major preoccupation of the Treasury. Congress was urged during the year to enact additional taxes to produce \$10,500,000,000 of added revenue. Action on a 1943 revenue bill was delayed for many months while the Administration and Congress wrangled over the terms of pay-as-you-go tax legislation, which was concerned primarily with the way in which existing taxes are to be paid, rather than with raising more money for the Treasury. Thereafter, the favorable course of the war, the political reaction against Administration leadership, and the fact that the budget estimates of the Administration were proving too pessimistic produced a Congressional revolt and the legislature would approve only a small fraction of the additional tax revenue asked by the Treasury. On the other hand, the Treasury encountered a much larger measure of success in its efforts to sell new issues of Government securities to buyers other than the banks. Whereas in the first War Loan drive of December, 1942, almost 40 per cent of the securities sold went to commercial banks, in the third drive in September, 1943, the banks were excluded and \$18,943,000,000 of Treasury obligations were sold to individual and corporate subscribers. Only after the close of the drive were \$3,200,000,000 of other securities sold to commercial banks for additional cash. True, commercial banks helped the success of the third War Loan drive by purchasing Government securities in the open market to add to their portfolios and by making loans to subscribers to the War Loan, but the Treasury on the whole achieved a large measure of success in making its financing program less inflationary.

Tax receipts during the 1943-44 fiscal year were materially larger than the budget estimates. This reflected the expansion in personal and corporate incomes, the productivity of the withholding of personal income taxes that went into effect in July, 1943, and larger than anticipated receipts from other imposts. The Treasury, near the end of the year, raised its estimate of total receipts from \$33,081,000,000 contained in the original budget of the President to \$41,137,000,000. The combination of reduced expenditures and increased revenues resulted in an expected deficit of \$55,000,000,000 for the year ending June 30, 1944, as compared with the original estimate of \$71,047,000,000 contained in the President's budget message to Congress.

Federal Expenditures. The outlays of the Federal Government in the fiscal year ended June 30, 1943, aggregated \$78,179,000,000. This represented an increase of \$45,782,000,000 over the total of the year before. Increased war outlays accounted for the entire increase, expenditures for war activities alone being \$46,098,000,000 more than the year before. Nonwar outlays were reduced, despite increased interest payments on the national debt. Smaller public works and relief outlays accounted for the decline in nonwar expenditures, the chief decreases occurring in sums allotted the Works Projects Administration and the National Youth Administration. Funds for these two agencies, in fact, were halted altogether by Congress, and no allowance was made for them in the budget for the year beginning July 1, 1943.

The rapid increase in the national debt naturally caused a rise in interest payments. Interest on the public debt required \$1,808,000,000 in the 1943 fiscal year, an increase of \$548,000,000 over the year before. Interest outlays did not expand as rapidly as the amount of the national debt, however, because of a decrease in the average rate of interest paid on Government obligations.

The largest part of the war expenditures was represented by sums allotted the War and Navy Departments. Military outlays in the 1942 and 1943 fiscal years, and on a monthly basis during the first quarter of the 1944 fiscal year, are shown in Table I.

TABLE I—ANALYSIS OF EXPENDITURES FOR WAR ACTIVITIES
(In millions of dollars)

Fiscal Year (ended June 30), or month	Total	War Department	Navy Department	Agriculture Department	Federal Security Agency	Federal Works Agency	National Housing Agency	Selective Service (administrative)	Treasury Department	U.S. Maritime Commission	War Shipping Administration	Aid to China	Other war activities expenditures
1942.....	26,011	14,070	8,580	696	111	62	297	33	519	929	132	200	382
1943.....	72,109	42,265	20,888	2,011	153	215	608	52	1,201	2,776	1,105	40	795
1943-4													
July.....	6,432	3,808	1,898	12	8	24	72	5	95	319	105	..	85
August....	7,232	4,219	2,037	180	16	27	68	5	118	361	119	..	81
September..	6,952	4,036	1,909	239	11	24	50	5	114	366	130	..	69
October....	6,989	4,142	1,955	176	24	25	54	5	100	294	148	..	66
November...	7,541	4,173	2,134	332	14	19	44	5	111	402	216	..	91
December...	6,718	3,841	2,050	45	6	21	39	5	108	356	164	..	82

In addition to the huge sum spent for war purposes by the Treasury directly, substantial outlays were made also by Government corporations, the most important of which is the Reconstruction Finance Corporation (q.v.) whose subsidiary, the Defense Plant Corporation, has taken over the financing of most of the new manufacturing facilities provided by the Government for war production. These Government agencies received \$3,555,000,000 in additional funds through the sale of their obligations to the Treasury during the year.

Expenditures for the fiscal years ended June 30, 1942 and 1943, and estimates for the fiscal year 1944, as revised by the Treasury on Aug. 1, 1943, are shown in Table II.

TABLE II—EXPENDITURES FOR THE FISCAL YEARS 1942, 1943, AND 1944 (ESTIMATED)
(In millions of dollars)

	Actual 1942	Actual 1943	Estimated 1944
War activities:			
War Department.....	14,070	42,265	56,000
Navy Department.....	8,580	20,888	28,000
Miscellaneous war activities.	8,362	8,955	13,000
Total war activities.....	26,011	72,109	97,000
Veterans' Administration.....	556	602	887
Public Works.....	680	543	464
Aid to agriculture.....	1,225	1,163	960
Social Security program.....	659	735	766
Work Projects Administration and National Youth Administration.....	970	299	.....
Civilian Conservation Corps...	163	18	.....
Interest on the public debt....	1,260	1,808	2,700
Other.....	873	901	1,259
Total expenditures.....	32,397	78,179	104,036

Federal Revenues. Receipts of the Federal Government for the fiscal year ended June 30, 1943, aggregated \$22,282,000,000, an increase of \$9,483,000,000 over the year before. Of these receipts, \$1,498,000,000 consisted of social security taxes, from which \$1,103,000,000 were transferred to the Federal Old-Age and Survivors Insurance Trust Fund. Taxes on income and profits produced more than two-thirds of all Treasury receipts, with excise taxes on alcoholic beverages, tobacco and several other manufactured goods providing most of the balance.

The chief sources of Treasury revenue for the fiscal year 1943 and estimates for the following fiscal year, as revised on Aug. 1, 1943, are shown in Table III.

Treasury Financing. The public debt of the United States increased \$64,274,000,000 during the fiscal year ended June 30, 1943. The public debt at the end of the year reached the unprecedented total of \$136,696,000,000. In addition, \$4,100,000,000 of bonds guaranteed by the United States Government were outstanding at the end of the fiscal year. The Federal debt continued to rise rapidly

from month to month after the close of the fiscal year, to finance the enormous war expenditures of the Government.

The Treasury borrowed \$64,274,000,000 during the fiscal year, of which \$55,897,000,000 was required for the budget, \$1,861,000,000 for expenditures in trust accounts and \$8,515,000,000 was added to cash in the General Fund. Of the total sum borrowed, \$2,986,000,000 was obtained through sales of special issues to social security and other Government funds, and \$15,690,000,000 by the sale of war savings bonds and stamps to

TABLE III—RECEIPTS FOR THE FISCAL YEARS 1942, 1943, AND 1944 (ESTIMATED)
(In millions of dollars)

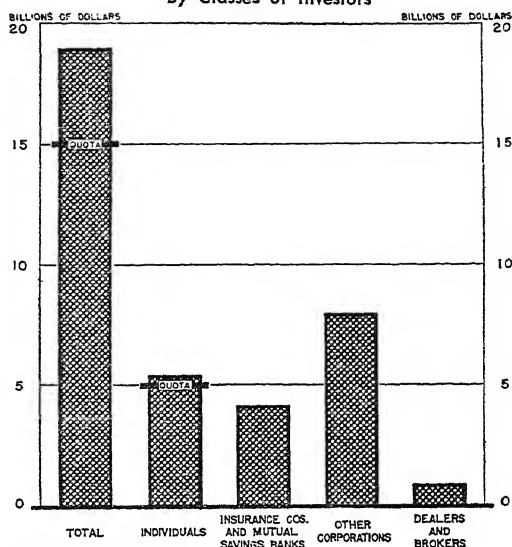
	Actual 1942	Actual 1943	Est. 1944
Internal revenue:			
Income and profits taxes	7,960	16,094	31,962
Employment taxes	1,186	1,498	2,094
Miscellaneous internal revenue	3,847	4,553	4,935
Customs	389	324	334
Other receipts	286	916	1,026
Total receipts	13,668	23,385	40,350
Less:			
Amounts transferred to Federal Old-Age and Survivors Insurance Trust Fund	869	1,103	1,632
Net receipts	12,799	22,282	38,718

the public. New public issues of marketable securities aggregated \$44,736,000,000. The average rate of interest on all Government securities outstanding was 1.979 per cent at the close of the fiscal year, as compared with 2.285 per cent at the close of the 1942 fiscal year.

The ownership of Government securities on June 30, 1943, as reported by the United States Treasury, is shown in Table IV.

By the end of the fiscal year wartime financing had changed the character of the public debt of

THIRD WAR LOAN DRIVE
By Classes of Investors



Federal Reserve Bulletin

TABLE IV—OWNERSHIP OF U.S. GOVERNMENT SECURITIES JUNE 30, 1943
(In millions of dollars)

Classification	Total amount outstanding	Banks	Life Insurance Cos.	Fire, Casualty, & Marine Ins. Cos.	U.S. Govt. agencies, & Federal Res. Banks	All other investors
Treasury bills	11,864	6,523	145	9	3,826	1,361
Certificates of indebtedness	16,561	10,008	111	193	1,143	5,106
Treasury notes	9,168	5,655	163	112	835	2,402
Treasury bonds	57,520	28,951	9,944	1,497	4,513	12,615
Other bonds	196	12	*	1	34	149
Guaranteed issues	4,023	2,678	265	44	285	751
Total	99,333	53,826	10,630	1,856	10,636	22,385

the United States to a large extent, bringing about an enormous increase in the volume of short-term and demand obligations outstanding. The changes for the year in each type of publicly-held obligation is shown in Table V.

TABLE V—STATEMENT OF THE PUBLIC DEBT
(In millions of dollars)

	End of fiscal year 1942	1943
Securities issued by the United States		
Interest-bearing debt:		
Public issues:		
Marketable issues		
Treasury bills	2,508	11,864
Certificates of indebtedness	3,096	16,561
Treasury notes	6,689	9,168
Treasury bonds	38,085	57,520
Other bonds	196	196
Total marketable issues	50,573	95,310
Non-marketable issues		
U.S. savings bonds	10,188	21,256
Treasury notes—tax and savings series	3,015	7,495
Adjusted service bonds	229	222
Depository bonds	79	226
Total nonmarketable issues	13,510	29,200
Total public issues	64,083	124,509

Of the publicly-held interest-bearing obligations, \$11,864,000,000 consisted of Treasury bills maturing weekly within a three months' period, and \$16,561,000,000 consisted of certificates of indebtedness coming due within one year. In addition, \$29,200,000,000 of nonmarketable obligations, redeemable on demand, were outstanding.

A compilation prepared by the Treasury showed that within five years more than \$56,000,000,000 of marketable interest-bearing securities held by the public would fall due, or well over half the total of such obligations outstanding.

Two War Loan drives were conducted during the calendar year 1943. Repeated experience with

TABLE VI—WAR LOAN DRIVES
(In millions of dollars)

Types of Securities	Second Drive	Third Drive
To nonbank investors:		
Series E savings bonds	1,473	2,472
Series F and G savings bonds	667	831
Savings notes	1,652	2,483
2½ per cent bonds	3,762	3,777
1½ and 2 per cent bonds	2,817	5,260
Certificates	3,104	4,120
Total to nonbank investors	13,476	18,943
To commercial banks:		
Treasury bills	810	.....
Certificates	2,147	.....
1½ and 2 per cent bonds	2,122	.....
Total to commercial banks	5,079	.....

these drives greatly increased their effectiveness, particularly because of the huge voluntary organization that was built up to conduct these drives and the effective support of industry in the shape of contributed advertising. For the third War Loan, which produced almost \$19,000,000,000 of sales, a War Finance Division was set up in the Treasury with a national Director of Sales. State War Finance Committees were established to

whom quotas were assigned, and local War Finance Committees were organized along city and county lines. Purchasers were offered a choice of War Savings Bonds Series E, F, and G, and Series C Savings Notes as nonmarketable issues, and $\frac{7}{8}$ per cent Certificates of Indebtedness, 2 per cent ten-year Treasury bonds, and $2\frac{1}{2}$ per cent 26-year Treasury bonds as marketable issues. Types of securities sold in the second and third War Loans are shown in Table VI.

See BANKS AND BANKING; CUSTOMS, BUREAU OF; FINANCIAL REVIEW; TAXATION; UNITED STATES.
JULES I. BOGEN.

PUBLIC HEALTH. See under HEALTH WORK.

PUBLIC HEALTH, Inter-American Cooperative Service for. See NICARAGUA under History.

PUBLIC HEALTH SERVICE, U.S. The war has given the U.S. Public Health Service an opportunity to test the prewar protective measures, and to see more clearly the problems which lie ahead. Despite the threat of epidemic diseases to the war effort, their prompt control has constituted but a small part of the wartime task of the Public Health Service. Ninety per cent of the Service's resources, in manpower, materiel, and money, have been channeled into direct war work. Virtually all research of the National Institute of Health has been turned to new problems arising from the conditions of global war. The few remaining studies are essential to the preservation of our continuing search for knowledge upon the diseases of mankind.

Division of States Relations. The functions of the States Relations Division during the fiscal year were (1) to administer the emergency health and sanitation program designed to establish and maintain public health safeguards in areas of military and war-industry activity, (2) to aid State health departments in developing adequate State and local public health programs through provision of technical consultation service and financial assistance under the terms of title VI of the Social Security Act, and (3) to prevent the inter-state spread of communicable disease by application of quarantine regulations and direct control measures.

A total of \$21,221,874 was appropriated for the fiscal year to cover these activities. The emergency health and sanitation appropriation amounted to \$9,702,200. The amount available under title VI of the Social Security Act was \$11,000,000. Other appropriations to carry out measures to prevent the spread of disease made up the total.

The reconnaissance surveys undertaken in November, 1940, to determine the need for public health facilities and services in vital areas were continued. On June 30, 1943, the emergency health and sanitation corps of the Public Health Service comprised 4,347 persons, including 160 physicians, 5 dentists, 330 engineers and sanitarians, 127 nurses, 123 specialists and technicians, and 3,602 nonprofessional workers. With personnel from this corps, many crowded but undeveloped localities were furnished with at least a nucleus of health organization. Basic environmental sanitation, and control of venereal and other infectious diseases constituted the major problems in such communities. Applications for the construction of hospitals, health centers, water supplies, sewerage disposal, and sanitation facilities have been reviewed by the Public Health Service and those projects considered essential were approved for certification to the Federal Works Agency.

Notable among special control programs have been: (1) The control of malaria, as a result of which satisfactory control has been maintained in 94 per cent of the control areas, with a force of 3,704 persons engaged in controlling mosquito production; (2) tuberculosis control, by which 320,000 workers in 85 war establishments were given chest examinations and 60,000 migratory workers were examined before entering the United States from Mexico; (3) plague control operations in and near several western military areas where plague-infested rodents were at large; and (4) typhus fever control in rat-infested communities of the South where typhus is endemic.

To help meet the urgent need for more nurses, the Congress appropriated \$3,500,000 for the continuation and expansion of the nursing education program during the fiscal year 1943. The appropriation authorized the following types of programs: (1) Basic training for under-graduate nurses, (2) refresher courses for inactive registered nurses, and (3) post-graduate instruction in the various nursing specialties. Under this program, tuition scholarships were granted to 5,975 under-graduate students, refresher courses were given to 816 inactive registered nurses in order that they might return to active service; and post-graduate instruction in the various specialties was given to 2,285 nurses.

Under the provisions of the Bolton Act, which was passed in June, 1943, a new Division of Nurse Education has been established. The provision calls for the recruitment of 65,000 new student nurses yearly. Trainees enrolled in the United States Cadet Nursing Corps receive free tuition, maintenance, uniforms, and a monthly stipend. The Congress appropriated \$45,000,000 for the fiscal year 1944 to carry out this program.

Division of Marine Hospitals and Relief. The expanded medical activities relating to the Merchant Marine and the U.S. Coast Guard constituted major additional responsibilities. There was an increase in the number of cases manifesting definite mental illness and in the number of women and children treated in Marine Hospitals. Over 1,300,000 patients were furnished hospital and office care in 1943 as compared to 547,000 in 1941, an increase of about 141 per cent. Personnel of the U.S. Coast Guard accounted for 64,123 patients as compared to 7,082 in 1941. The number of merchant seamen treated in hospitals decreased from 29,038 in 1941 to 26,196 in 1943. During the fiscal year 1943, approximately 60,000 eligible government employees received 200,000 treatments.

The Public Health Service Hospital, Sheepshead Bay, Brooklyn, N.Y., opened during the year, afforded medical relief to the large Coast Guard Training Station and Maritime Service Training Station on adjoining reservations. A school for pharmacist mates was inaugurated at the Maritime Station and a program was designed for training hundreds of men to serve as technically trained laymen aboard seagoing vessels. This is the beginning of a minimal medical program, which includes first aid and sanitation aboard American merchant ships.

Continuous caudal analgesia in obstetrics, developed by two members of the staff at the Staten Island Marine Hospital, received wide recognition as a distinct contribution to the practice of obstetrics. By this method trained physicians were able to accomplish safe and painless childbirth in about 90 per cent of hospitalized cases. A post-graduate school was inaugurated at the Philadel-

phia Lying-In Hospital as a cooperative program designed for further study and teaching of this method. (For a description, see MEDICINE.)

Division of Venereal Disease Control. For the fiscal year 1943, the Congress appropriated \$12,267,000 for venereal disease control. Of this amount, 81.4 per cent was allotted to the 48 States, the District of Columbia, Alaska, Puerto Rico, the Virgin Islands, and Hawaii; \$3,018,900 was ear-marked for State cooperation with the armed forces and for other war needs. The per capita amounts by State and local funds have increased from 3.2 cents per capita in 1939 to 5.6 cents in 1943. The total of Federal, State, local, and other funds spent for venereal disease control during 1943 was \$19,368,458.

All phases of the venereal disease control program were intensified. As a result of stringent civilian control measures and the vigorous control program of the armed services, it has been possible to avert the sharp increase in syphilis and gonorrhea among soldiers, sailors, and war workers. Such an increase has hitherto been regarded as a wartime inevitability.

Approximately 31,000,000 serologic tests for syphilis were made in all laboratories, an increase of 53.1 per cent over 1942. Laboratory tests for gonorrhea increased 13.9 per cent. Approximately 9,000 epidemiological workers are now employed in the 48 States and the District of Columbia, on either a full-time or a part-time basis.

Research has been carried on to determine which of the new intensive treatment schedules for syphilis are most effective and safe. The following were appraised during the year: 1-day fever plus chemotherapy, 5-day drip, the 10-20-day Schoch method, the 10-12 week Eagle, and variations of these. Sulfathiazole and sulfadiazine have continued to be the drugs of choice in the treatment of gonorrhea.

An outstanding achievement of the year is the network of Rapid Treatment Centers developed by the U.S. Public Health Service in cooperation with State departments of health and other public and private agencies. These centers have been strategically located in war areas where the venereal disease problem is a menace to the health of armed and industrial forces. To date 30 Rapid Treatment Centers have been established in the United States, the Canal Zone, Puerto Rico, and the Virgin Islands.

Division of Mental Hygiene. The Public Health Service continued to furnish and supervise the medical, psychiatric, and other technical services in the Federal penal and correctional institutions.

Research on the nature and treatment of drug addiction has been continued at the Lexington, Ky., Hospital. At the beginning of the fiscal year, the number of patients was 1,094 and at the close of the year 1,112. The treatment of the psychiatric war casualties has been a stimulating influence on the medical staff. At the Fort Worth, Tex., Hospital, the treatment of narcotic addict patients has been reduced to a minimum, while the treatment of psychotic patients has increased.

National Institute of Health (Division of Scientific Research). The research branch of the Public Health Service undertook many investigations at the request of the Army and Navy and other war agencies. These studies are of military importance and are confidential. Among other assistance to the armed services, has been the securing of vast supplies of biological and other medical requisites for protection of the men at war. The requirements of the military forces and of foreign coun-

tries markedly increased the exercise of control measures and the testing of products.

Research was carried on as to the distribution of physicians, dentists, and facilities for medical care. This work has included investigation of the distribution of physicians in the various States and counties in the United States just prior to the war and of the effect upon medical services in States and counties of the withdrawal of practicing physicians for the armed forces. Studies of the weekly patient load of private practitioners were made in Maryland, Georgia, and the District of Columbia. This knowledge is a prerequisite to the establishment of a rational program of withdrawal of physicians for the armed forces.

In nutrition research, it has been shown that the hyalinization, necrosis, and calcification of voluntary muscle can be prevented by L-tocopherol (vitamin E) and that the dermatitis can be cured or prevented by biotin. The granulocytopenia and anemia can be corrected by various liver preparations.

Urgent practical aspects of military aviation have been under study. The altitude chamber constructed in collaboration with the Navy has been operated throughout the year in connection with many special studies. Altitudes from sea level to 58,000 feet and temperatures from 67° F. to 100° F. can be simulated. It is possible to simulate ascents at any rate up to 18,000 feet per minute, with corresponding changes in temperature.

In the field of cancer research, studies were carried on along the following lines: (1) Carcinogenesis, (2) characteristics of tumor tissue, (3) tumor growth, and (4) epidemiology.

The report on annual cancer incidence, based on a survey of 10 metropolitan areas in northern, southern, and western United States, was completed. Comparative rates by geographic region are given for each of the major sites of cancer by sex and color, corrected for age distribution. This report makes available for the first time observed incidence rates for comparison with secondary attack rates in cancer.

Industrial hygiene activities reached a new peak in 1942-43. Shortages of personnel and facilities impeded the expansion of services to meet these needs. As a result, the resources of the Public Health Service have been concentrated upon the first objective of the industrial hygiene program—namely, the creation and maintenance of a safe and healthful working environment in the nation's war production plants.

The development of entire new industries with plants using a great many chemical substances dangerous to workers has necessitated research work to establish maximum amounts of these chemicals to which the worker may be safely exposed. Methods for the control of industrial hazards encountered in the management of explosives have been developed. The toxicity of three new explosives was studied at the request of the Army. A study was made upon the effect of TNT on workers in a Federal ordnance plant. Analyses were made of 2,531 environmental samples from arsenals and ordnance plants.

Toward the close of the year, studies were initiated in the National Institute of Health on filariasis, schistosomiasis, and other exotic diseases prevalent in war zones.

Division of Foreign and Insular Quarantine and Immigration. Most of the problems confronting the National Quarantine Service during the last fiscal year continued, and some increased in intensity. Airplane traffic extending into all parts of the

world increased considerably the danger of introducing into the United States exotic vectors of disease and required additional expert quarantine service at airports of entry. A standard procedure of disinsectization of aircraft was adopted which reduced markedly the delay incident to previous practice.

During the fiscal year, 12,933 planes and 8,546 vessels were inspected. The number of persons, including passengers and crews, examined on ships and planes entering the United States was 859,520; at international border stations, 318,507 persons were examined.

Division of Sanitary Reports and Statistics. On the basis of mortality and morbidity records, the health of the nation continued at a high level during 1942. The preliminary death rate of 10.4 per 1,000 population and the provisional infant and maternal rates of 4.8 and 2.7 respectively, per 1,000 live births were the lowest on record for the United States. The provisional general mortality figure for the first 6 months of 1943 was slightly higher than for the same period last year; the death rate was 11.0 per 1,000 population, or about 3.8 per cent higher than the rate of 10.6 for the comparable period in 1942.

For the following diseases the provisional mortality rates for 1942 were the lowest in the past 5 years: typhoid and para-typhoid fever, diarrhea and enteritis under two years, diphtheria, scarlet fever, influenza, pneumonia, whooping cough, and tuberculosis. The death rate for measles was lower in 1942 than in 1941. The rates for encephalitis and poliomyelitis were lower than those for the three prior years. The principal diseases for which a higher mortality rate was reported in 1942 than in 1941 were cancer, diseases of the heart, cerebral hemorrhage, and diabetes. See VITAL STATISTICS.

The incidence of meningococcus meningitis was 1.9 times higher during the calendar year 1942 than the 5-year median (1937-41). Early in 1943, the disease reached epidemic proportions. Up to the week ending Nov. 27, 1943, 16,256 cases had been reported. Although poliomyelitis was below the median expectancy in 1942, it became epidemic early in 1943. By Nov. 27, 1943, a total of 11,993 cases had been reported, a larger number than had been reported for any entire year since 1931 when a total of 15,790 cases was reported.

Information regarding diseases in foreign countries was very incomplete. However, the fragmentary reports received indicate increases in some of the quarantinable diseases, especially typhus fever. In China, twice as many cholera cases were reported for 1942 as for 1941. Fourteen countries reported cases of yellow fever in 1942, compared to 16 in 1941.

At the close of the fiscal year 1943, 597 officers of the regular Commissioned Corps and 555 Reserve Officers were on active duty. The total personnel of the Public Health Service numbered 21,927, of whom 4,662 were collaborating epidemiologists and assisting epidemiologists who receive only nominal compensation for collection of morbidity data. Detailed accounts of the activities of the Public Health Service may be found in the Annual Reports of the Surgeon General for the fiscal years 1942 and 1943.

See CIVILIAN DEFENSE, OFFICE OF; HOSPITALIZATION, FEDERAL BOARD OF; SANITATION.

THOMAS PARRAN.

PUBLIC LANDS. See GEOLOGICAL SURVEY.

PUBLIC OPINION POLLS. See GREAT BRITAIN and MEXICO under *History*; OPINION RESEARCH CENTER.

PUBLIC ROADS ADMINISTRATION (PRA). An agency of the U.S. Government under the jurisdiction of the Federal Works Agency. It normally administers Federal-aid funds and emergency appropriations for road construction, cooperating with State highway departments. It cooperates with the Department of Agriculture on forest roads and supervises the construction of national park roads.

Since the beginning of war, approval of new projects has been limited to those of direct importance to the war effort. Federal-aid funds are being used to build access roads to Army and Navy training and concentration areas and war industries, and to correct critical weaknesses in the main highways of war transport. The Administration is supervising the construction of flight strips and has cooperated in the building of the roads to Alaska and Panama. The research staff is engaged in the study of war problems and major highway projects for postwar construction. Commissioner in 1943: Thomas H. MacDonald.

See BRIDGES; ROADS AND STREETS.

PUBLIC SCHOOLS. See SCHOOLS.

PUBLIC WORKS. See CONSTRUCTION INDUSTRY; FEDERAL WORKS AGENCY; POSTWAR PLANNING.

PUBLIC WORKS ADMINISTRATION (PWA). A Government agency under the jurisdiction of the Federal Works Agency, now in liquidation. The last appropriation was made in 1938. (See YEAR BOOK for 1940.) See RECONSTRUCTION FINANCE CORPORATION.

PUBLISHING. See BUSINESS REVIEW; LIBRARY PROGRESS; LITERATURE, AMERICAN AND BRITISH, and articles on foreign literatures; MAGAZINES; NEWSPAPERS; PAPER AND PULP.

PUERTO RICO. A West Indian Island, forming a territory of the United States. Acquired from Spain through the Treaty of Paris, 1898. Small adjacent islands, Vieques and Culebra, are included in its jurisdiction and statistics. Capital, San Juan.

Area and Population. Area, 3,435 square miles. Population, 1940 (U.S. Census), 1,869,225; 1935 (by special census of the Puerto Rico Reconstruction Administration), 1,723,534; 1930 (U.S. Census), 1,543,913. In 1940 the dwellers in places of 2,500 or more numbered 566,357; the rural population, 1,302,898. The territory had, in 1940, 544.2 inhabitants to the square mile—an exceptional density for an area dependent mainly on agriculture. Despite an excess of emigration over immigration, the population gained by 21 per cent in the ten-year period 1930-40. The estimated population on July 1, 1941, was 1,911,290 (white, 1,452,678; colored, 458,612). Living births in 1941 numbered 76,130 (39.8 per 1,000); deaths, 35,551 (18.6 per 1,000). Populations of the chief cities (1940 census): San Juan, 169,247; Ponce, 65,182; Mayagüez, 50,376.

Education. Out of more than 700,000 children of school age, only 293,263 were enrolled in public day schools on May 29, 1942. Of the total enrollment, 135,621 were in elementary rural schools, 124,962 in elementary urban schools, 15,757 in rural second units schools, and 16,418 in high schools. The University of Puerto Rico had 5,441 students (Rio Piedras colleges, 3,016; Mayagüez branch, 648; extension courses, 1,454; evening

schools, 323). The average expenditure per pupil enrolled in public schools was \$26.08 in 1941-42, of which the Insular Government contributed \$21.53 and the municipal governments \$4.55. In a complete reorganization of the school system introduced Aug. 3, 1942, the elementary course was reduced to six grades and the secondary system divided into a three-year junior and a three-year senior high school.

Production. The island is predominantly agricultural, with about 825,000 acres under cultivation out of a total area of some 2,000,000 acres. The acreage under food crops increased from 317,000 in 1940 to 407,000 in 1942, but the population was still dependent upon imports for 30 per cent of its food. Sugar cane, the chief crop, yielded 1,146,584 tons (of 2,000 lb.) of raw sugar in 1941-42, compared with 932,164 tons in 1940-41. Estimated yields of other leading crops in 1941-42: Coffee, 14,632,700 lb. (29,293,000 in 1940-41); tobacco, 30,000,000 lb.; cotton, 47,000 quintals. Corn, beans, sweet potatoes, bananas, and rice are leading food crops. Fruits and coconuts are exported. In 1941-42 there were 828 industrial enterprises of all kinds, including agricultural industries, with 64,766 employees and wage earners whose average hourly earnings were 25.1 cents and average actual weekly earnings \$7.99. Production of electric power was 231,016,320 kw-hr in 1941-42. Since 1942 the electric power system has been entirely government-owned and operated.

Overseas Trade. Statistics for 1941-42 and 1942-43 were withheld for military reasons. For the fiscal year ended June 30, 1941, imports were \$128,033,769 (\$120,956,780 from the United States); exports, \$87,349,204 (\$86,341,362 to the United States). See 1943 YEAR BOOK for further details.

Finance. General Fund receipts during the fiscal year 1941-42 amounted to \$37,658,861 and net disbursements to \$23,579,916, leaving a surplus of \$14,554,969. Added to the cash balance of \$6,447,843 on hand July 1, 1941, this left a cash balance of \$20,526,788 on July 1, 1942. Offsetting this were appropriation liabilities of \$5,971,819 carried over to the fiscal year 1942-43. The bonded indebtedness of the Insular Government on July 1, 1942, was \$23,700,000 (\$26,975,000 on July 1, 1941).

Transportation. The island has about 1,441 miles of motor roads, 922 miles of railways (including 574 miles of private lines on sugar plantations), and air connections at San Juan with Miami, Fla., and the various Caribbean and South American countries.

Government. Under the Organic Act, as passed by the U.S. Congress in 1917 and later amended, Puerto Rico has the status of an organized territory of the United States. Its citizens are U.S. citizens. A Governor, the chief executive officer, holds office by appointment of the President of the United States, confirmed by the U.S. Senate. The popular vote elects a Legislature of two houses and a Resident Commissioner to the United States.

Governor, 1943, Rexford G. Tugwell. Resident Commissioner, Bolívar Pagán.

HISTORY

Struggle for Political Reforms. Important in the news of 1943 in Puerto Rico was the struggle for political reforms. In this many-sided conflict the issues ranged from statehood to complete independence. For more than a quarter of a century the Federal government had made no major change in the governmental machinery of the island. The organic law of 1917, called the Jones Act, accorded to the people the status of United States citizens

and greatly extended the scope of self-government. That Act did not define a long-range political policy and, except for a few minor Congressional revisions, it still remained the basic law.

Just as in World War I, the serious economic and military disturbances in World War II again focussed attention upon the deep-seated political problems in Puerto Rico. The effects of the effort at internal reforms by Governor Rexford Guy Tugwell and his administration (see YEAR BOOK for 1943, pp. 580-581) were reflected in a bill introduced in Congress in January, 1943. Senator A. H. Vandenburg proposed that Governor Tugwell be removed from office and a definite two-year term be fixed for all future governors. Senator Vandenburg charged that the swiftly expanding bureaucracy and the "superlatively expensive administration, with all its implicit national socialization," was a threat to the welfare of the Puerto Ricans themselves. He based his contention, in part, on the petitions for removal by the Resident Commissioner to the United States, the Union Republican, Socialist, and Unification parties of Puerto Rico, the Chamber of Commerce, the Farmers Association, and the Free Federation of Labor of Puerto Rico.

Again on April 2, Senator M. R. Tydings, Chairman of the Senate Committee on Territories and Insular Affairs, introduced another bill providing for complete independence. Enactment of such legislation, he said, would be in keeping with the attitude of the United States toward Cuba and the Philippines. This bill stipulated that there must be freedom of religion, speech, press, and assembly, and safeguards of the rights of individuals and of U.S. investments. It proposed that a tariff on Puerto Rican goods be levied beginning one year after independence at 5 per cent of the normal rate on foreign products. Duties then would be increased 5 per cent each year for 20 years when full tariffs would be reached. Similar levies would be made by Puerto Rico on goods from the United States. Final withdrawal from American control would be on the Fourth of July following the completion of all preliminary steps. In the transition period a high commissioner, appointed by the President of the United States, would protect the rights and properties of American citizens.

An independent group of eight Puerto Ricans, including three members of the Tugwell administration, drew up another bill for independence and sent it to Secretary Harold L. Ickes, Department of the Interior. This proposal, similar to the Tydings bill, would allow the Puerto Ricans a voice in the determination of the kind of government to be established and to participate in the preparation of legislation dealing with their social and economic problems. It also would allow the United States to keep the military and naval bases in the island. The proponents of this measure held that it would placate the adherents of statehood which it is said Congress is clearly unwilling to concede, and if granted would not solve the economic situation.

President Roosevelt took an active role in the movement toward governmental reform. Early in March he appointed an eight-man committee, composed of an equal number of Puerto Ricans and of continental residents, to study the problem and to make recommendations for its solution. This committee was composed of Secretary Ickes, chairman; Abe Fortas, Under-Secretary of the Interior; Governor Tugwell; the Rev. Raymond A. McGowan, Assistant Director of the Social Action Department of the National Catholic Welfare Conference; Luis Muñoz Marín, president of the Puerto Rican

Senate, and president of the Popular Democratic Party; Judge Martin Travieso, Associate Justice of the Puerto Rican Supreme Court; Celestino Iriarte, president of the Union Republican party; and José Ramírez Santinbañez, president of the Liberal party. Then on September 28, when the report had been completed, the President in a special message asked Congress to grant speedy home rule for Puerto Rico, including election of a governor, now appointed by the Chief Executive of the United States. This was the first major step toward local self-determination since the acquisition in 1899.

Other provisions of the bill called for a Presidentially-appointed commissioner general who would be responsible for the execution of laws applicable to the island; a government secretary to assume the governor's functions in his absence; procedure for impeachment of civil authorities; appointment of all heads and assistant heads of executive departments by the Governor, with the advice and consent of the Puerto Rican Senate; authorization for the Legislature to create new departments and to redefine powers and duties of departments; abolition of the executive council, and its functions to be given to the Governor unless local legislation should provide otherwise; appointment of an auditor by the Governor for an eight-year term, with greater authority than under the present law; and retention by the President of veto power to prevent "enactment of laws conflicting with the security and inter-national relations of the United States or affecting the fundamental relations of the United States and Puerto Rico."

Two days before the above message to Congress, a report of Governor Tugwell, prepared in February for the Chavez Committee of the U.S. Senate which investigated social and economic conditions in the island, was released to the public. In it he charged that although the United States was extending the good-neighbor policy to all the rest of Latin America, it had no policy toward Puerto Rico and was keeping the Puerto Ricans in "humiliating suspense, by implication neither fit to govern themselves nor to become part of the United States." The report claimed that Puerto Rico was no better off than when it was under Spanish rule in 1898 and called upon Congress to inaugurate a deliberate policy of assistance and after a few years permit the electorate to express itself.

In the 31-page document the Governor defended his two-year administration which had been under constant attack in and out of Congress. He said that his lot did not differ from that of his predecessors but had been exaggerated by the crisis of war and the accumulation of internal ills. An editorial in *The New York Times* took issue with the statement that the island was no better off than when it was won from Spain. It cited a number of points in refutation: an increase in exports from \$8,500,000 in 1901 to \$85,000,000 in 1940; imports from \$9,000,000 to \$110,000,000 during the same period; the value of manufactures in Puerto Rico rose from \$36,000,000 in 1909 to \$111,000,000 in 1939; illiteracy was reduced 55 per cent from 1920 to 1940; and the population doubled, indicating that a country which can support twice its population "can hardly be said to be no better off." The editorial accused the Governor of ignoring the huge sums spent by numerous Federal agencies in the island.

Congress, too, took a hand in the struggle to achieve political reforms. Both the House and Senate sent investigating committees to the island and held hearings in Washington on several of the measures proposing changes in the government.

The Senate group spent 10 days in February investigating conditions. Four months later a five-man committee from the House went to Puerto Rico for a first-hand study of political, social, and economic conditions. In addition, hearings were held in Washington on bills to limit the tenure of office of the Governor to four years, to assist in relieving economic distress, and to investigate political, economic, and social conditions. All the evidence tended to confirm the fact that changes in the island's political status constitute a complex problem which cannot be resolved easily. Once a clearly-defined political goal is worked out, the framework for an economic, social, and cultural policy can be established.

Economic Conditions. The lack of any important war industries and the stagnation of business due to inadequate shipping and scarcity of critical materials increased Puerto Rico's need for relief in 1943. In recognition of this need, a Federal Relief appropriation not to exceed \$8,000,000 was made to carry on relief work in Puerto Rico and the Virgin Islands after the expiration of WPA on July 30. Widespread unemployment and the rise in living costs caused the Food Distribution Administration to increase its distribution of free food and the Insular Legislature to allot a total of \$16,000,000 from June, 1942, to June, 1944, for relief.

This appropriation was put in the hands of the Insular Emergency Council for direct and work relief. Its program was extremely diversified. It included the construction of rural trails to enable farmers to market their produce; allotments for reforestation and soil conservation; grants to the Department of Education for employment of workers in the Second Unit rural schools and to the Department of Health for a survey of the municipal water systems. Allotments were also made for school lunchrooms, nursery schools, and for the distribution of free milk to poor children. Insular Emergency funds were also used partly to finance the Federal Works Agency clothing project. This project provided for the employment of idle women needleworkers, production of garments and bedding for free distribution, and the repair of garments for the Army and Navy and other war agencies.

The Emergency Council also cooperated in the construction of 400 low-cost houses in rural Puerto Rico. No critical war materials were used in the construction; the houses were built of bitudobe made of blocks of earth treated with asphalt. Grants were also made to municipalities for public works construction and repairs. An independent relief measure was carried on in Puerto Rico through the Save the Children Foundation of America. About 150 cases of clothing were collected on the mainland and shipped to Puerto Rico for distribution to 50,000 children.

The Puerto Rico Development Company was instrumental in the opening of new businesses by private enterprise. Its purpose was to stimulate and even help financially by loans where the risks were sound. The Company arranged with the WPB for priorities for the construction of a glass factory to make bottles for the rum industry. It also assisted in plans for the construction of a factory to manufacture building board from bagasse. Bagasse is made from the fiber waste product of sugar cane and has been used elsewhere as a substitute for wood. A third project inaugurated by the Puerto Rico Development Company was a contract with local manufacturers for the production of bamboo furniture. In May, the Development Bank of Puerto Rico was authorized by the 1943 Legislature. The

authorization law provides that "in making loans or otherwise extending credit, preference and priority shall be given, when all other factors are equal, to the Puerto Rico Development Company and to enterprises recommended by said Company. . . ." Despite unemployment and increased relief payments the Insular Treasury receipts hit an all-time high—\$41,000,000. Much of the increase was due to higher rum revenues and to the increase in income taxes from \$7,635,000 of the previous year to \$11,312,000.

Shipping and Food. The shipping crisis at the beginning of the year and its consequent threat to the supplying of Puerto Rico's basic living commodities overshadowed all other developments in the island in 1943. Despite an increased food planting program, Puerto Rico's 2,000,000 people were still dependent upon imports from the mainland for more than 30 per cent of their food, and nearly all their clothing and other essential commodities. From the low of September, 1942, when the island received only 7 per cent of the average monthly civilian tonnage of 1940, shipping was stepped up in 1943, so that by the end of the fiscal year Puerto Rico had satisfactory surpluses of most basic commodities. This was effected through the efforts of both the Insular Government and the various Federal shipping agencies. The export picture was also brightened. Warehouses were cleared of sugar stocks, and total export tonnage was only slightly below normal.

Until April, 1943, the ports of Ponce and Mayagüez had been closed to transports by the War Shipping Administration. This had caused a serious dislocation of the dock labor supply. In these two ports about 3,500 dock workers were idle and the number of dock workers in the one open port, San Juan, was insufficient. At the request of Governor Tugwell the two ports were opened by the WSA in April, with an improvement in the speed of loading and unloading ships in Puerto Rican ports.

In May Secretary of the Interior Ickes announced a plan for clearing the cargo for small vessels plying between Puerto Rico and the mainland. These ships ranged in size from 50 to 1,000 deadweight tons and were formerly used only for inter-island trade, but began to aid substantially in shipping approved items to and from the mainland in the latter part of 1943.

The island itself made serious efforts to increase its production of foodstuffs. The Puerto Rico Land Authority acquired 16,000 acres of land, with a value of more than \$2,000,000, and distributed it in small parcels to more than 4,000 families. These families represented about 22,000 persons resettled on agricultural land.

Harvesting of food crops in 1942 showed an increase of 28.4 per cent in total area planted to food crops, and planting in 1943 of corn, beans, rice, sweet potatoes, and other essentials was stepped up in several ways. The War Relief Program set up a food planting program with a grant of half a million dollars from the Insular Emergency Council. One part of the program consisted of free supplies of seeds and fertilizers to those farmers unable to buy them. Another method of increasing food plantings was through the fertilizer rationing program. Cane farmers received fertilizer rations for the usual cane plantings. Applications for additional cane fertilizer were granted only on condition that the cane farmer purchase fertilizer for food crops in an amount equal to 25 per cent of the cane fertilizer.

An indication of the substantial improvement in

the food situation in 1943 was the increase in the rice quota in May. The Food Distribution Administration and the Office of Price Administration made possible at that time a weekly quota of six pounds of rice per person, and the prospects were that this quota could be continued.

Fish has long been a staple in the Puerto Rico diet, and has been almost entirely imported. In 1943, however, the Puerto Rican Department of Agriculture and Commerce received an appropriation of \$250,000 for developing local commercial fisheries. The plan was to open Fisheries Cooperatives, construct docks and refrigerated warehouses, and to acquire fishing equipment.

Labor. Industrial disputes were frequent during 1943, due notably to the dismissal of many employees and to the drastic rise in living costs. The Department of Labor of Puerto Rico assisted in the conciliation of 71 strikes, the most notable being one in the sugar industry where a truce was accepted pending fixing of wages by the Minimum Wage Board. In May the railroad workers struck over pay increases. The workers voluntarily returned to work when the Office of Defense Transportation, under an executive order by President Roosevelt, took over the railroad, and assumed responsibility for negotiations with the workers.

In spite of work stoppages, there was more notable progress in the field of social-labor legislation during 1941-43 than at any other time during the previous 40 years of American control. Some of the legislation enacted dealt with the Land Law, the Minimum Wage Law, the laws creating the Water Resources Authority, abolition of child labor, setting an eight-hour day for the Insular Police, twelve-months pay for school teachers, exemption of homesteads valued at less than \$1,000 from taxation, and many other measures involving the protection, safety, and general welfare of workers. Widespread unemployment was combated to some extent by the migration of 900 Puerto Ricans to French Guiana for work on war contracts. Governor Tugwell initiated a movement to find employment for other workers on the mainland in defense plants.

Government Control of Utilities. Late in 1942 the Puerto Rico Railway, Light, and Power Company and the Mayagüez Light, Power, and Ice Company, Puerto Rico's two largest power companies, were taken over for operation by the Federal Government. After an investigation by the Chavez Committee of the U.S. Senate and a year-long fight to prove that the U.S. Government had acted in bad faith, the two companies sold their properties. The Puerto Rico Water Resources Authority purchased the Mayagüez Company for \$1,700,000 and the Puerto Rico Company for \$10,000,000.

The Language Dilemma. When the Senate Committee, mentioned above, returned to the mainland it was reported that they expressed disappointment over the progress of teaching English in the public schools. Whereupon the Secretary of the Interior brought charges against the Commissioner of Education for alleged failure to increase instruction in English. In reply, Dr. José M. Gallardo, Commissioner, submitted his resignation. But two months later he withdrew it at the request of Secretary Ickes who wrote that he believed both of them were agreed on the goal that practical bilingualism was desirable and could be achieved.

See BIRTH CONTROL; SPANISH-AMERICAN LITERATURES; WAR COMMUNICATIONS, BOARD OF.

CHARLES F. REID.

PULP MAGAZINES. See MAGAZINES.

PULITZER PRIZES. A series of annual awards established in 1915 by the will of Joseph Pulitzer, publisher of the *New York World*. On May 3, 1943, the following awards were made by the Trustees of Columbia University on the recommendation of the Advisory Board of the Graduate School of Journalism:

Prizes in Journalism: (1) For the most disinterested and meritorious public service rendered by an American newspaper, a gold medal costing \$500: *The World-Herald* (Omaha, Nebraska) for its initiative and originality in planning a state-wide campaign for the collection of scrap metal for the war effort, which was adopted on a national scale by other newspapers. (2) For distinguished editorial writing, \$500: Forrest W. Seymour of *The Register and Tribune* (Des Moines, Ia.). (3) For distinguished correspondence, \$500: Hanson W. Baldwin of *The New York Times* for a report of his tour of the Southwest Pacific. (4) For a distinguished example of a cartoonist's work published in an American newspaper, \$500: Jay Norwood Daryl of the *New York Herald Tribune* for "What a Place for a Waste Paper Salvage Campaign," published Oct. 13, 1942. (5) For an outstanding example of news photography published in a daily newspaper, \$500: Frank Noel of the Associated Press for "Water!", published Apr. 17, 1942. (6) For a distinguished example of telegraphic reporting on national affairs, \$500: No award. (7) For a distinguished example of telegraphic reporting on international affairs, \$500: Ira Wolfert of North American Newspaper Alliance, Inc., for his series of three articles on the fifth battle of the Solomons. (8) For a distinguished example of a reporter's work, \$500: George Weller of *The Chicago Daily News* for his graphic story of how a Pharmacist's Mate under enemy waters performed an operation for appendicitis saving a sailor's life.

Prizes in Letters: (1) For a distinguished novel published during the year by an American author, preferably dealing with American life, \$500: *Dragon's Teeth*, by Upton Sinclair (The Viking Press). (2) For the original American play, performed in New York, which shall represent in the marked fashion the educational value and power of the stage, preferably dealing with American life, \$500: *The Skin of Our Teeth*, by Thornton Wilder. (3) For a distinguished book of the year upon the history of the United States, \$500: *Paul Revere and the World He Lived In*, by Esther Forbes (Houghton Mifflin Co.). (4) For a distinguished American biography: *Admiral of the Ocean Sea*, by Samuel Eliot Morison (Little, Brown & Co.). (5) For a distinguished volume of verse, \$500: *A Witness Tree*, by Robert Frost (Henry Holt & Co.).

For Pulitzer Prize in music, see MUSIC.

PULPWOOD. See PAPER AND PULP.

PURCHASING POWER. See BUSINESS REVIEW; LIVING COSTS; UNITED STATES under *Inflation*.

PYROPHYLLITE. See TALC.

QATAR. See under ARABIA.

QUAKERS. See FRIENDS.

QUANTUM OF ENERGY. See PHYSICS under *Quantum of Energy*.

QUARANTINE. See PUBLIC HEALTH SERVICE. For Plant Quarantine, see INSECT PESTS.

QUARTZ. See CHEMISTRY.

QUEBEC. A province in eastern Canada. Area, 594,534 square miles, including 71,000 square

miles of fresh water. Population (1941 census), 3,331,882 (1,672,982 male; 1,658,900 female), comprising, by racial origin, French 2,695,032, British Isles races 452,887, Jewish 66,277, Italian 28,051, etc. Religious membership (1941 census): Roman Catholic (including Greek Catholic) 2,894,621, Anglican 162,056, United Church 100,196, Jewish 65,683, Presbyterian 56,086, etc. In 1942 there were 95,031 living births, 33,801 deaths, and 33,857 marriages. Chief cities: Quebec (capital) 150,757 inhabitants in 1941, Montreal 903,007, Verdun 67,349, Three Rivers 42,007, Sherbrooke 35,965, Hull 32,947, Outremont 30,751, Westmount 26,047, Shawinigan Falls 20,325, Lacine 20,051. Education (1940-41): 703,856 students in schools and colleges.

Production. The gross value of agricultural output in 1942 was \$322,282,000 (field crops accounted for \$144,796,000, milk \$74,814,000, farm animals \$59,718,000, poultry and eggs \$19,322,000, fruits and vegetables \$11,955,000, maple products \$5,098,000, fiber flax \$2,933,000, tobacco \$1,530,000, fur farming \$1,367,000). Chief field crops (1943): oats 38,025,000 bu., mixed grains 7,032,000 bu., potatoes 562,800 tons, turnips 392,750 tons, hay and clover 6,702,000 tons, alfalfa 191,000 tons, fodder corn 690,000 tons. Livestock (June 1, 1943): 1,905,100 cattle (including 1,018,900 milk cows), 978,900 swine, 574,500 sheep, 329,500 horses, 9,654,900 hens and chickens, 119,200 turkeys. Fur output (1941-42): 601,211 pelts worth \$3,894,630. Fisheries catch (1942): \$4,194,092. Paper output (1942): 2,189,800 tons valued at \$118,614,967. The gross value of products in the lumber industry for 1941 was \$30,000,903.

Mineral output for 1942 was valued at \$104,749,101 (gold, 1,101,533 fine oz., accounted for \$42,409,020, other metals \$19,055,076, nonmetals \$25,280,948, structural products \$18,004,057). Manufacturing (1941): 8,711 plants, 327,591 employees, \$393,819,671 for salaries and wages, \$961,162,209 for cost of materials, \$815,086,832 was the net value of production.

Government. Finance (year ended Mar. 31, 1942): revenue \$91,998,814; expenditure \$72,153,331; total direct and indirect liabilities (less sinking funds) \$417,137,840. The executive authority is vested in a lieutenant governor who is advised by a ministry of the legislature. There are 24 members (appointed for life) in the Legislative Council, and 86 members (elected by male and female suffrage) in the Legislative Assembly (70 Liberals, 15 Union Nationale, 1 Independent; elected Oct. 25, 1939). Twenty-four members (appointed for life) in the Senate and 65 elected members in the House of Commons represent Quebec province in the Dominion Parliament at Ottawa. Lieutenant Governor, Maj. Gen. Sir Eugène Fiset (app. Dec. 30, 1939). Premier, Adélard Godbout (Liberal).

QUEBEC CONFERENCE. See CANADA, GREAT BRITAIN, under *History*; UNITED NATIONS.

QUEENSLAND. See AUSTRALIA under *Area and Population*.

QUICKSILVER. See MERCURY.

QUININE, QUININE SUBSTITUTES. See CHEMISTRY under *Drugs*; COSTA RICA and other American republics under *History*. Compare MALARIA.

QUISLING, QUISLINGS. See NORWAY under *Government and History*.

RABAU. See NEW BRITAIN; NEW GUINEA, TERRITORY OF; WORLD WAR under *War in the Pacific*.

RACE PROBLEMS. See **NEGROES**. For **Race Discrimination**, see also **FAIR EMPLOYMENT PRACTICE, COMMITTEE ON**. For **Racial Studies**, see **PSYCHOLOGY**. Also see **INDIA, JAPAN, and SOUTH AFRICA, UNION OF**, under **History** and the cross references under **ALIENS and MINORITIES**.

RACING. The turf enjoyed its most prosperous season in 1943, a year so profitable to the sport of kings that one hesitates to quote figures for fear of frightening our economists, some of whom surely will cry, "Inflation is here!" But any report of horse racing must be written in dollars and cents so we're off:

Mutuel betting on the nation's tracks ran to more than \$710,000,000, a total so impressive that the year's end found Federal and State governments competing for the privilege of taxing the racing industry. The most remarkable day of the entire season was Labor Day at Aqueduct when 48,774 fans bet the world's record total of \$2,926,702 on eight races. All along the line, the sport rolled up new highs—in attendance, taxes paid, money distributed to horsemen and funds raised for service relief and other charities. New York State alone received \$19,050,692 in turf revenue.

Racing's contributions to war relief and other funds went over \$4,000,000 even though no meetings were held at such popular tracks as Miami's Hialeah Park and Delaware Park, to mention only two. It was estimated that the sale of war bonds at tracks throughout the nation was better than \$100,000,000, "Back the Attack Day" at Belmont Park alone netting \$30,000,000.

In this year of unprecedented turf prosperity one horse stood out above the rest. Count Fleet, owned by Mrs. John D. Hertz and 2-year-old leader of 1942, carried right on among the 3-year-olds in a campaign that opened on April 13 and ended all too soon on June 5 when he hurt an ankle in the Belmont Stakes. The son of Reigh Count and Quickly made history in his abbreviated season, becoming the first racer to capture the five big stakes in his division, the Wood Memorial, Kentucky Derby, Preakness, Withers, and Belmont. The Count, with Johnny Longden in the saddle, started in six races and easily won them all. He not only stood head and shoulders above the 3-year-olds, but was the year's leading money winner with earnings totaling the sum of \$174,055.

The juvenile and older divisions had no outstanding figures, the leaders in both groups taking turns winning to scramble the championship ratings of their classes.

The famous Hambletonian trot, classic of harness racing, was won by Volo Song, owned by William H. Strang of Brooklyn. Volo Song proved the most consistent 3-year-old trotter of the year and leading money winner. The Goshen meeting, giving way to travel restrictions, was held at the Empire City track in Yonkers with the result that thousands of New York sports fans saw the Hambletonian for the first time.

THOMAS V. HANEY.

RADAR. See **PHYSICS** under *Radar*; also **COMMUNICATIONS** under *Radio*.

RADIO. For technical developments, see **COMMUNICATIONS** under *Radio* and the topics there listed; for the broadcasting industry in the UNITED STATES, see **RADIO PROGRAMS**. For regulation, see **FEDERAL COMMUNICATIONS COMMISSION**; **WAR COMMUNICATIONS, BOARD OF**.

RADIO DETECTING APPARATUS. See **PHYSICS** under *Radar*.

RADIOGRAPHY. See under **X-RAYS**.

RADIO INTELLIGENCE DIVISION (RID). See **FEDERAL COMMUNICATIONS COMMISSION**.

RADIOLOCATOR. British type of radio detecting apparatus. Compare **RADAR**.

RADIOPHOTO SERVICE. See **PHOTOGRAPHY**.

RADIO PROGRAMS. The year 1943 in the annals of radio broadcasting was one of new programs, if not better ones. The records disclose a gain of nearly 14 per cent in the number of sponsored programs carried on the nighttime networks in December, 1943, against the same month of 1942, and an unprecedented rise in the use of radio as an advertising medium during 1943.

Listening, however, did not keep pace with the growth in the number of sponsored offerings. An index of sets-in-use reveals that nighttime listening in the last quarter of 1943 ran about 5 per cent behind 1942. Daytime listening in the same quarter, however, was up by the rather narrow margin of 1 per cent. An increase in the total number of programs accompanied by a decrease in the total number of listeners inevitably resulted in an average of fewer listeners per program.

These conclusions are based on findings by the Commercial Analysis of Broadcasting, a nonprofit organization engaged in the analysis of radio program popularity. According to the C.A.B., of the 137 rated programs in December, 1943, those that were new to sponsored network broadcasting in the summer and fall of 1943 (i.e. less than six months old) reached a total of 33, the largest number of new offerings ever to go on the air within a similar range of time; 24 per cent of the 137 were less than a year old. In the same month the low-ranking shows—those having a popularity rating of less than 10—increased 40 per cent over December, 1942. (C.A.B. ratings are expressed in percentage terms; that is, a rating of 10 means that 10 out of 100 set-owners interviewed reported listening to the program.)

RATINGS OF SPONSORED NETWORK NIGHTTIME PROGRAMS IN DECEMBER

Rating (% of Set Owners)	No. of Programs 1943	1942
40% and over.....	2	4
35.0-39.9.....	2	0
30.0-34.9.....	4	5
25.0-29.9.....	7	4
20.0-24.9.....	11	8
15.0-19.9.....	15	15
10.0-14.9.....	30	37
5.0- 9.9.....	40	30
0.0- 4.9.....	26	17
	137	120

The broadcast year of 1943, therefore, must be appraised as a period in which sponsors and producers sought new radio talent and accepted as a due course the low ratings that are part and parcel of building radio audiences. The assumption that 1943 yielded a crop of radio lemons, because the number of listeners dropped, does not apply. The quality of the 1943 performances stacks up very neatly with 1942 and, of course, outdoes 1941 and previous years.

A comparison of programs with C.A.B. ratings of better than 10 and less than 30, the mid-range, indicates little deterioration in 1943. The mid-range that signifies established and continuing audience acceptance contained 63 of the 137 network programs broadcast in December, 1943. The 1942 record for the same month found 64 shows out of

tion was effected voluntarily through the three responsible agencies—the ODT, the Interstate Commerce Commission, and the Association of American Railroads.

A large-scale example of the coordination of railways was the routing of transcontinental traffic. On Feb. 1, 1943, W. F. Kirk, assistant general manager of the Missouri Pacific railway, was appointed regional director in charge of the Western Region of the Division of Railway Transport of the Office of Defense Transportation. At the first indication that a road forming a part of the route of an oil train, for example, is congested, the Office of Defense Transportation reroutes the train to some other road that can handle it expeditiously. Of course the road over which it would have moved under the original routing loses all share in the revenue. Prior to the war this would have been considered robbery; in 1943 it was recognized as necessary coordination. This arrangement was put into effect Mar. 1, 1943, and during the first month of operation the Office of Defense Transportation diverted 326 trains.

When the Los Angeles terminal showed signs of becoming congested as a result of the accumulation of empty cars Mr. Kirk ordered a 36-hour "hold back" on all but vital loads and started preferred movement of empties out of Los Angeles. As a result nearly 3,000 empties were started east out of that terminal and the threatened congestion was avoided. In the past when a road was congested with empty cars the only feasible way of getting rid of them was to load them with revenue freight.

The ICC gave permission for railways to furnish two or three refrigerator cars for west bound loading in place of the box car that had been ordered. Only the car load rate was charged on the shipment. The movement west bound of empty refrigerator cars had for many years been an expense to the railways and an unproductive utilization of track and equipment.

Shippers have been in the habit of using freight cars as storage space. By calling attention to flagrant instances the Office of Defense Transportation largely eliminated the practice during 1943. With car builders strictly rationed as to materials it was impossible for railways to expand their car supply to meet war time shipments adequately. Prompt unloading of cars by consignees had the effect of greatly increasing the car supply.

Whether the railways have been superseded by highway vehicles and airplanes is a question that has been asked with increasing frequency during the last ten years. Hitler asked himself the question and his answer was to put available money, labor, and materials into road building. It was proved one of his mistakes. Highway vehicles were unable to move the volume of freight and passengers created by an emergency. That was for a country of 224,000 square miles. The performance of American railways in 1943 gave the answer for a country of 3,000,000 square miles. The total number of passengers carried one mile was 85 billion. There were 725 billion tons carried one mile.

These figures are compiled in the accounting offices but what the railway operating officer actually saw was impressive. He saw a train of ten coaches, each coach carrying eighty recruits traveling at thirty miles an hour. Thus eighty men were moved a mile with the expenditure of two shovels of coal and one tenth of a train crew's time. He saw a freight train of forty flat cars, each flat car loaded with two tanks destined for the army—

eighty tanks moving to the front at twenty miles an hour. This is in contrast to a bus carrying twelve passengers or a truck carrying at most forty tons of tank parts.

To secure heavier loading of freight cars, the Office of Defense Transportation issued orders 1 and 18. No. 1 required specified minimum tonnages for merchandise cars and No. 18 did the same for carload freight. The orders caused some slight delay in loading cars and considerable extra expense, but the net result was a greater volume of traffic moved and the orders were obeyed willingly despite the expense involved. It was thought that Orders 1 and 18, beside inducing heavier car loading, decreased the less-than-carload business.

The incentive to increase the transportation of petroleum was even greater than that for other traffic, and the railways obtained very close to 100 per cent use out of the facilities that they had. However, many railway men acknowledged that the wartime test demonstrated that railways were not the most efficacious method of transporting this commodity. A large volume of business can be moved by pipeline more satisfactorily than by railway.

The results of railway transport of oil were nonetheless noteworthy. In the week ended Apr. 10, 1943, rail deliveries of petroleum into the eastern coast area average 925,079 barrels daily, in addition to 24,667 barrels a day reaching New England in the form of kerosene in metal drums. A year earlier that amount of oil traffic would have been thought impossible.

Labor Supply. The men in the operating department of the railways are skilled workmen whose training has not fitted them for work in war production plants. Therefore the drain on operating department labor was not as great as that on other railway departments. Competent telegraph operators are an exception. They are in demand in war service and the loss of such men has been felt keenly. The railways established schools for telegraphers but were unable to turn out skilled men fast enough to meet their own needs.

Nearly all enginemen and conductors are over draft age but increased railway traffic created a serious shortage of these men. Switchmen are mostly young men. The draft combined with greatly increased switching requirements to make railway yards a bottleneck. At Chicago many of the roads entered into an agreement with the Brotherhood of Railroad Trainmen whereby surplus yard switchmen on one road are loaned to a road having a shortage. The employee retains his seniority on his home road while working for another. Women have been employed on railways to release men for more skilled service or to replace men drafted. They have been employed mostly in offices although some have gone into the shops. One road alone has employed over 5,000 women. The railways have to some extent alleviated the shortage of maintenance of way labor by securing Mexican labor at 45 cents an hour. See LABOR CONDITIONS.

Railroad Strike Threat. The wage demands of 350,000 operating railroad workers and 1,100,000 non-operating employees had been under contest throughout the year. On Dec. 15, 1943, the Big Five operating brotherhoods set December 30 as the date for the start of a progressive walkout which would halt transportation in three days. Six days later the fifteen unions representing the 1,100,000 nonoperating workers decided to strike the same day.

Meanwhile Congress itself had stepped into the case of the nonoperating workers and, had the session not closed abruptly for the Christmas recess, the national legislative branch would have lined up behind the rail employees, giving legislative sanction to a wage rise which the Administration held would "break the line" against inflation.

Intervening, President Roosevelt summoned representatives of the carriers and the operating brotherhoods to the White House on Sunday, December 18. The chief executive offered to serve as sole arbiter, and the Brotherhoods of Railway Trainmen and Engineers cooperated, but the Brotherhoods of Locomotive Firemen and Enginemen, Switchmen and Conductors (membership 150,000) declined. Later the nonoperating unions capitulated. On December 27, after a conference which, with apparently satisfactory awards made by the President and with the three (firemen, conductors, and switchmen's) brotherhoods still holding out, the President, not waiting for their strike deadline, ordered seizure of the railroads. On December 29, a bare ten hours before the strike was to begin, the adamant brotherhoods "postponed" it.

This action left uncompleted a resolution, sponsored by Senator Truman of Missouri and Representative Crosser of Ohio, which would certify that the wage rise of eight cents an hour for the nonoperating rail workers, agreed to by the carriers and the unions on August 7, was in full accord with the Railway Labor Act (rail labor has its own law) and other laws, and "shall be held so to be, anything in the law or laws of the United States to the contrary notwithstanding." After the Senate adopted the resolution the House Interstate Commerce committee set out to release rail workers from the restrictions of the stabilization laws, and still was working on the legislation when the railroads were taken over.

Material. Upkeep of both track and equipment was limited by the ability of the railways to obtain the needed material. There was a tendency in Washington to give steel for weapons priority over steel for rails and railway bridges, but Mr. Eastman as Office of Defense Transportation Director urged that a reasonably safe railway roadbed was a prerequisite for military supplies. The result was that the railways obtained sufficient material for their most pressing track repairs. There is an honest difference of opinion as to whether it is sufficient to provide reasonably safe track for fast, heavy traffic.

Equipment. Usually the number and type of cars and locomotives ordered is a compromise between estimated requirements and financial considerations. In 1943, however, orders showed estimates of vital needs without much consideration of the financial question. Locomotives and cars built reflected the quantity of material that could be obtained.

There were 1,054 locomotives ordered in 1943 compared with 1,269 ordered in 1942. The number built in 1943 was 1,070 compared with 947 built in 1942. There were 38,958 freight cars ordered for use by the railways in 1943 compared with 22,307 ordered in 1942. The number built in 1943 was 32,726 (64,479 in 1942) but of those built only 1,135 were for export while 4,908 of those built in 1942 were for export. There were 58 passenger cars ordered in 1943 whereas in 1942 orders were placed for only 2 passenger cars. All passenger cars built in 1943 were for the army except 19 completing previous export orders.

It is the consensus of railway operating men that the cars and locomotives built since 1929, in-

cluding those built in 1943, are not an adequate replacement of equipment that was in good condition in 1929. However, building in 1943 was conditioned not by needs but by quantity of material available. Lack of material to some extent limited repairs to equipment in 1943. In general, however, it was a shortage of labor in the mechanical department that was responsible for inadequate repairs.

Earnings. The earnings of the railways taken as a whole have of course been large. The distribution among individual companies however has not been based on the ability to obtain traffic, rather it has been based on the ability to handle traffic. It is an open question whether on the return of peace conditions some way may be found for continuing routing according to capacity or whether there will be a resumption of competition to obtain traffic with only secondary regard to capacity. In this connection, the question also arises as to whether the railway companies should try to buy bus lines and air lines or should try to prevent them from handling the traffic as satisfactorily as the railways. The New York, New Haven and Hartford Ry. begin in 1943 to buy air routes with the evident intention of furnishing transportation by air as well as by rail for New England; in that way it would conserve profits rather than compete for profits.

The following is an income account for the Class I railways, which include nearly all the mileage of railways in the United States.

<i>Income Account</i>	<i>1943</i>	<i>1942</i>
	<i>(Millions of \$)</i>	
Total Operating Revenues	8,904	7,010
Total Operating Expenses	5,394	4,451
Tax Accruals	1,805	1,076
Net Railway Operating Income	1,512	1,309
Net Income (after fixed and contingent charges)	967	795
<i>Break-up of Revenues</i>	<i>1943</i>	<i>1942</i>
	<i>(Millions of \$)</i>	
Freight Revenue	1,711	5,653
Passenger Revenue	1,587	895
Mail Revenue	123	110
Express Revenue	126	84
All Other	357	268
Total	8,904	7,010
<i>Break-up of Expenses</i>	<i>1943</i>	<i>1942</i>
	<i>(Millions of \$)</i>	
Maintenance of Way	1,021	762
Maintenance of Equipment	1,374	1,180
Traffic	126	117
Transportation	2,594	2,169
General and Other	279	223
Total	5,394	4,451

Results of Operation. The customary measures of railway operation are the ton miles and passenger miles carried. Thus in 1943 the ton miles carried by Class I railways in the United States was 725 millions, compared with 638 millions in 1942.

Types of Motive Power. At a time when the greatest efforts were being made to move freight and passengers with only secondary consideration given to cost, studies were being made of the best type of motive power for railways with cost as a first consideration. The three types studied were steam locomotives (a self-contained unit) electric locomotives (dependent on overhead trolley or third rail) and Diesel-electric locomotives (a self-contained unit). The steam locomotive has been in use for a hundred years, the electric since 1895 and the Diesel since 1925. The facts in regard to these forms of motive power were brought out in a paper by A. G. Oehler and H. C. Wilcox, editors of the *Railway Age*. The paper was presented be-

for the American Institute of Electrical Engineers at their 1943 annual meeting.

In respect to first cost the steam locomotive has a decided advantage. The paper indicated that the first cost of a steam locomotive averaged \$35 per cylinder h.p., the electric \$65 per h.p. at the rail, and the Diesel-electric \$87.50 per engine h.p. It will be seen that the bases used are not the same but it was generally agreed that the first cost of the steam locomotive was about a third lower than the electric and less than half of that of the Diesel.

Where coal delivered at the tender costs \$4 or more a ton, the fuel costs of a Diesel-electric are less than those of a steam locomotive. This is for line haul. For switching work fuel costs of Diesels are less than those of steam locomotives even where coal costs less than \$4 a ton because the steam locomotive consumes fuel in the intervals between switching movements.

The cost of repairs of steam locomotives is higher than the cost of repairs of either Diesel-electrics or electric locomotives. The damage to roadbed is greater for the steam than for either the Diesel-electric or electric locomotive. It is estimated that the life of a steam locomotive is longer than that of a Diesel-electric but just how much longer is still a question of dispute. In the matter of smoke elimination both the electric and Diesel-electric have a great advantage over the steam locomotive.

At present an effort is being made to reduce the weight of Diesel-electrics and the figure of 760,000 lb. for the weight of a Diesel-electric is the one aimed at.

Financial Situation. In the first week of April, 1943, the average price of 20 representative railway stocks was 37.51 compared with 25.62 just a year earlier. The average price of 20 representative railway bonds was 76.95 compared with 67.53 in the corresponding week of 1942. This improvement in railway credit was due only in part to large current earnings. There is evidence that it was due primarily to the improvement that was taking place in the character of railway securities and in the improvement in the treatment accorded securities of railways in difficulties by the courts.

An instance of this is given in the readjustment of the financial structure of the Colorado & Southern Ry. The final decree approving the extension of bond maturities and modification of interest of the C & S was entered by the Federal court on Mar. 8, 1943.

This was the first plan of railway reorganization approved by the courts since the passage of the McLaughlin act, enacted in October, 1942. The avowed purpose of the act was to foster the reorganization of railway companies that were in temporary financial difficulties without the expense of a receivership (lawyer's fees and banker's commissions).

The C & S plan extends until 1955 the maturity date of bonds and notes falling due in 1944-45 and reduces annual fixed charges from \$1,971,707 to \$927,392 during the period of extension. Thus part of the fixed charges are made contingent on earnings. The contingent charges are made non-cumulative, that is if the charges are not earned they are not only not paid but also they are not a charge on future earnings.

The plan further provides that during its operation all available net income after the payment of contingent interest on the mortgage bonds must be applied to the reduction of debt or to the replacement or increase of working capital as directed by the Reconstruction Finance Corporation. Thus during the working of the plan the stockholders may

not be able to obtain any dividends but they will retain their stock.

A plan such as this goes a long way to take from the bankers the power to throw a railway company into receivership arbitrarily. The Colorado & Southern reorganization demonstrated also that railway securities might be sound or unsound irrespective of which bankers offered them, and thus tended to restore confidence in railway securities as investments. It eliminated the fear that railway securities were peculiarly vulnerable to manipulation. While this reasoning was that of only the more cautious investors it was a factor in the improvement that took place in the market price of railway securities during 1943.

What new financing there was in 1943 was either refunding or betterment of existing plant. Nevertheless the improvement in market price permitted this refunding or payment for betterments to be done at less cost to the railway companies than would have been possible at any time since 1929.

A revised plan for the reorganization of the Denver Rio Grande Western Ry. was made public on June 25, 1943. This plan superseded one made in 1942. Both plans were drawn up by the Interstate Commerce Commission. The 1943 plan differed from the one made the year before by increasing the total capitalization to \$155,173,127 from \$154,521,612, and providing that new equipment is to be paid for out of current earnings. Under the 1943 plan there is no loan for new money and no note to the R.R. Credit Corp. Under the 1942 plan there was a loan of \$2,250,000 for new money and a note for \$265,194 to the R.R. Credit Corp.

The aims of the 1943 reorganizations were to reduce fixed charges to a minimum even if this involved increases of total debt. For instance if a railway company could borrow three thousand dollars by selling three \$1,000 bonds, each carrying 5 and one-half per cent fixed interest, but would have to sell four \$1,000 bonds carrying 6 per cent interest payable only if earned, the plan favored in 1943 was to sell the four income bonds rather than the three fixed-charge bonds.

Prior to 1943 it was the practice to pay out in dividends surplus earnings of extraordinarily prosperous years. Plans meeting ICC and court approval in 1943 required that surplus earnings of prosperous years be used to reduce outstanding debt or pay for additional equipment free from debt.

Inflation. So that higher rates for transportation might not be a factor in inflation, the freight rate increase of 4.75 per cent authorized by the ICC, effective Mar. 18, 1942, was suspended for the period May 15, 1943, to the end of 1943. This suspension order of the ICC was avowedly an attempt to forestall higher prices made under the plea that "higher transportation rates had increased retailer's costs."

Scrap. A great effort had been made to collect scrap from railways some time before the general public became intensely interested in the subject. Prior to 1943 it was simply a matter of collecting for government use, but as the railways experienced difficulties in obtaining material for their own needs, it was found that steel which might have been turned into scrap could be welded to existing structures in such a way as to make unnecessary the replacement of the structure. Although the individual repair made in this way might be small the sum of all was very great indeed. Progress was such that the amount of ma-



Photos from Press Association, Inc.

NEITHER HITLER NOR TOJO WAS TO BLAME

Railway wrecks, although singularly few considering the greatly increased traffic the lines were called upon to handle, contributed to the losses in a war year. Above: In September, the Congressional Limited, crack train of the Pennsylvania Lines, broke in half on a curve in Philadelphia. At Left: Blazing clouds of oil and gasoline from a N.Y., N.H. & Hartford freight train derailed near Highland, N.Y.





AMONG THE THEATER'S VARIED PRESENTATIONS

1. Winged Victory
3. Oklahoma

2. Paul Robeson as Othello
4. The Voice of the Turtle

Photos by Vandamm Studio

terials and supplies could safely be reduced and the cost of upkeep lowered probably by several per cent.

Seatrains Competition. While railway executives willingly agreed to the rerouting of transcontinental freight in order to speed war traffic even when this involved a loss of revenue to some, they without exception opposed interchange of cars with seatrains that ran between Hoboken, N.J., and Belle Chasse, La., via Havana. The Interstate Commerce Commission had ordered the interchange of cars where the Seatrain Co. paid a dollar a day for each car.

The railways fought the order in the courts and on Oct. 9, 1943, the Federal court in New Jersey ruled that the order could not be enforced because the Interstate Commerce Commission had no power to order an interchange of cars with a carrier operating outside the territorial waters of the United States. Had the order been upheld it would have permitted the shipment of freight without breaking bulk between New York and California, in part by water, thus making it possible for a new competitor, a water carrier, to cut the transcontinental freight rate.

The list of railways that joined in the appeal gives an idea of how important it is, in maintaining the solvency of American railways, that the rate on long haul carload freight be maintained.

Neither truck nor airplane competition seriously affects the basic business of the railways. Water competition with the railways forced by law to furnish cars to shippers and then forced by order of the ICC to lease the loaded car at a dollar a day to seatrains would cut into this basic business. The court decision in the Seatrain case was therefore a major factor in continuing United States railway operations as heretofore conducted.

Railroad Retirement Board. At the end of September, 1943, there were 161,774 monthly benefits to railway employees in force and the average benefits were: \$66.20 for employee annuities, \$59.09 for pensions, \$31.87 for survivor annuities, \$35.37 for death-benefit annuities. The total tax collections under the Carriers Taxing Act for three months of the fiscal year (beginning July 1, 1943) was \$62,321,231 compared with \$48,923,759 for the first three months of the previous fiscal year. At the end of September, 1943, there was a balance in the Railroad Retirement account of \$311,187,000. The administrative expenses of the Board for September, 1943, were \$207,000. The amounts paid in to the Board by the employing railway companies together with the amounts paid by the employed workers on the railways was sufficient to cover the benefits and also the administrative expenses of the Board. This is an unusual achievement for a government agency.

In March, 1943, a report of the National Resources Planning Board on Security, Work, and Relief Policies compared the R.R. retirement benefits with those under general social security legislation and pointed out that the general benefits were only about a third as large as those paid under the R.R. Retirement Act. In addition to paying benefits the Board acts as a placement agent. In the fiscal year ended Sept. 30, 1943, the Board placed 248,754 railway employees comparing with 91,352 placements for the year ended Sept. 30, 1942.

See ACCIDENTS; COAL; ELECTRICAL INDUSTRIES; LABOR CONDITIONS under Federal Labor Legislation; RECONSTRUCTION FINANCE CORPORATION. For foreign railway statistics, see articles on countries under *Transportation*; also, *IRAN under History.*

For Mexican Railway Mission, see *COORDINATOR OF INTER-AMERICAN AFFAIRS.*

WILLIAM E. HOOPER.

RAPID TRANSIT. Total traffic on local passenger transport systems in 1943 reached approximately the predicted figure of 22 billions, as compared with 18 in 1942 and 14.3 in 1941. Of the 18 billion in 1942, about 7¼ were on street cars, 2½ on elevated and subway lines, 1 on trolley busses and 7¼ on motor busses. This record covers both urban and suburban services, but the suburban traffic was only 5 per cent of the total. In that year, also, the number of passengers on busses for the first time exceeded the number on street cars. One marked development of 1943 was the decrease in men employees and the increased employment of women.

The heavy traffic and intensive traffic peaks due to more riders and more rides per passenger had to be handled with relatively less equipment and fewer employees, since it was impossible to obtain the desired number of new cars and busses. The traffic and peak load conditions resulted largely from the grouping of munition and industrial plants, camps, and other war activities at many centers. Other factors were normal increase in population, the adoption of part time and doubled working shifts, and the restrictions on use of automobiles.

As an example, at Los Angeles the total number of passengers in 1943 was 36 per cent above that of 1942, which in turn was 26½ per cent above that of 1941. Attempts to level off the traffic peaks included staggered working hours in schools, stores, and factories. But the relief was not always as great as expected, since many of those released early with the intent that they should go home preferred to do shopping or attend movie shows.

Postwar developments in local transport services will be a factor in relation to city planning and municipal improvements, with financing as a serious problem. Increased speed of transport is a main consideration, and is one reason for the use of subways in congested city districts and of street-car lines on private right-of-way in outlying districts. At Cleveland, for example, tentative plans provide for a network of rapid-transit street-car lines supplemented by interlocking bus lines. Some of the street-car lines in outlying districts will be on the surface and then diverted to the right-of-way of existing railways so as to be capable of higher speeds. The various lines are to converge in an underground loop at the center of the city.

A notable event was the opening of Chicago's first subway line, on October 17. This is the State St. north-and-south line, five miles in length, including the incline viaducts connecting with elevated railway lines at each end of the subway. It is a deep-level line, with twin tunnels having tracks 44 ft. below the street level. Station facilities are provided on a mezzanine or intermediate floor 18 ft. below the street, having stairways to the sidewalks and stairways and escalators to the train platforms. Steel cars of the elevated railways have been adapted to subway service, as new cars could not be had. Trains use the subway as a link in their through runs.

Work on the second subway (Milwaukee Ave.-Lake St.-Dearborn St.) is 80 per cent completed, but halted by priority restrictions. An extension westward under VanBuren St. to a loop terminal at the river is proposed, with possible further ex-

tension under the river to serve the west-side section of the city. Unification of the elevated and surface lines and the bus company into a single concern is still in an indefinite stage. A plan approved by the city authorities, the Federal Court, and a referendum vote has been rejected by the Illinois Commerce Commission, whose approval is required by law. The Federal Court is interested, since both the elevated and the surface-line companies are in receivership. To break the deadlock, the mayor, in October, proposed municipal ownership of the three services.

In New York, the Long Island Railroad, whose traffic is largely of the suburban and commuter class, opened its $4\frac{1}{2}$ -mile Brooklyn subway along Atlantic Ave., eliminating $2\frac{1}{2}$ miles of four-track surface line (with a score of grade crossings) and 2 miles of steel elevated line. It is of the shallow type and its roof carries a four-lane street.

A terminal for busses and taxis is included in the great office building of the War Department at Arlington, Va. (a suburb of Washington), to facilitate the movements of some 40,000 employees. It has three 20-ft. roadways and three 10-ft. platforms long enough for 40 busses and 35 taxis. By aid of an electrical dispatching system, 30,000 people can be handled in an hour. Outside are parking spaces for busses, taxis, and 8,000 automobiles. A complicated system of roads with grade separations and interconnecting loops provides for converging and diverging traffic in various directions.

In Buenos Aires, Argentina, ten miles of extensions of the underground railways have been built to connect railway terminals and to serve suburban areas. Investigation by the Argentine government of financial relations between the Buenos Aires Transport Corporation and a Spanish company building the underground lines resulted in a recommendation for merging the latter concern in the former. The underground railway of Madrid, Spain, with 14 miles of line, has built an extension; and in Moscow, Russia, a 4-mile extension of the underground railway was put into service early in 1943. Plans of the Transportation Commission of Toronto, Canada, for postwar developments include outlying street-car lines on private right-of-way and a subway system through the business section. The purpose of this combination, as at Cleveland, Ohio (noted above), is to prevent traffic congestion and expedite local transport.

In England, the London Passenger Transport Board, which serves all means of local transport within an area 40×60 miles, carried 3,782 million passengers in the year ending with June, 1939, since which time no traffic records have been published. The equipment of this public body includes a large number of producer-gas busses. The use of producer-gas as fuel for busses and motor trucks is on the increase in various parts of the world, owing to the limited supply of gasoline and the restrictions on its use. Many of the English busses carry signs announcing the use of this gas made from English coal. An interesting feature for popularizing the use of motor busses in England is that a group of 60 bus companies, operating 12,270 vehicles, have cooperated in the organization of a public relations committee to promote and maintain a friendly understanding with the public by various means, and especially by extensive advertising in the daily papers of the large cities.

See MOTOR VEHICLES.

E. E. RUSSELL TRATMAN.

RATIONING. Control of rationing in the United States is a function of the Office of Price Administration. For the administration of the program and a list of rationed products with effective dates, see PRICE ADMINISTRATION, OFFICE OF. For a general discussion, see LIVING COSTS AND STANDARDS and UNITED STATES under *The Domestic Front*. See also articles on rationed products, as FOOD INDUSTRY, HIDES, LEATHER, AND SHOES, and SUGAR; CIVILIAN DEFENSE, OFFICE OF; CUSTOMS, BUREAU OF; FOOD AND DRUG ADMINISTRATION; POST OFFICE. For Ration Banking, see PRICE ADMINISTRATION.

For rationing in other countries, see AUSTRALIA, BRAZIL, EIRE, etc., under *History*.

RATIONS, Army. See FOOD INDUSTRY.

RAYON. See TEXTILES; also, BUSINESS REVIEW.

REA. Rural Electrification Administration. See AGRICULTURE under *Electrification of Farms*; ELECTRIC LIGHT AND POWER.

REAPPORTIONMENT. See STATE LEGISLATION under *State Government and Employees*.

RECIPROCITY AGREEMENTS. See STATE LEGISLATION under *Aviation, Highways, and Motor Vehicles*.

RECLAMATION, Bureau of. A bureau of the U.S. Department of the Interior, which conducts multi-purpose irrigation projects in the West. Its 52 projects, 167 dams, and 30 power plants (with an installed capacity of 1,952,962 kw.) have created homes for a million people on 4,000,000 acres of irrigable land. Power and municipal water operations serve an additional 4,000,000.

During the fiscal year 1943, plants on Bureau projects produced more than 9,500,000,000 kw-hr of electrical energy. Installed capacity will reach nearly 2,500,000 kw by May, 1944, but WPB restrictions prohibit further possible expansion for the time being. Construction on new irrigation systems was virtually halted in October, 1942, but some exceptions have since been made. On recommendation of the War Food Administration, the WPB lifted stop orders so as to enable the Bureau to extend irrigation service to 600,000 additional acres by 1945. War Relocation Centers for the Japanese are located on three of the irrigation projects, and Civilian Public Service Camps for conscientious objectors on three others.

The Bureau is preparing a construction program which can be launched quickly at the end of the war to cushion the shock of transition to a peacetime economy. It includes a nucleus of 20 uncompleted projects and at least 50 new irrigation and multi-purpose projects which would provide work for a year for nearly half a million men.

Commissioner in 1943: Harry W. Bashore. See AQUEDUCTS; DAMS; TUNNELS.

RECONSTRUCTION FINANCE CORPORATION (RFC). The Reconstruction Finance Corporation was created by "An Act to provide emergency financing facilities for financial institutions, to aid in financing agriculture, commerce, and industry, and for other purposes," approved Jan. 22, 1932. These powers have been increased by subsequent legislation. The Corporation may perform all functions it is authorized to perform under law until the close of business Jan. 22, 1947, or such earlier date as the President may authorize.

The principal war functions of the Corporation, as distinguished from its normal activities, include: The acquisition of strategic and critical materials by Rubber Reserve Company, Metals Reserve Company, and Defense Supplies Corporation; the financing of defense plants by Defense Plant Cor-

poration; the making available, through War Damage Corporation, of reasonable protection against loss of or damage to property, real or personal, resulting from enemy attack; and the making of loans to businesses engaged in the production of war material. The Corporation may also make loans to public agencies, financial institutions, insurance companies, railroads, drainage, levee, irrigation and similar districts, mining and fishing industries, public school districts or other public

in Australia, New Zealand, and other points in the Southern Pacific, in Great Britain, Northern Ireland, Iceland, India, China, the Middle East, Alaska, and North Africa, and had also provided 200 leave area clubs, aeroclubs, day rooms and other "on-post" clubs and about 100 clubmobiles. Red Cross workers landed with the troops in Sicily and Italy.

The lives of thousands of men were saved by blood plasma prepared from blood collected by

RFC SUMMARY OF ACTIVITIES FEB. 2, 1932, THROUGH NOV. 30, 1943

	Authorizations	Disbursements	Repayments and other reductions
For benefit of agriculture.....	\$ 2,603,733,431	\$ 1,452,180,464	\$ 1,450,620,907
To open banks to meet demands of depositors.....	1,334,880,161	1,138,251,619	1,091,565,374
For distribution to depositors in closed banks.....	1,419,531,473	1,056,883,720	1,039,375,956
For bank capital (including Export-Import Banks \$176,500,000 and Federal Home Loan Banks \$124,741,000).....	1,647,167,419	1,471,521,312	811,808,030
For self-liquidating projects (including PWA municipal securities).....	1,300,634,966	1,071,190,066	954,163,844
To business enterprises.....	683,658,957	347,437,861	253,162,596
For loans for National Defense and War Activities.....	14,136,015,567	10,957,356,334	4,608,923,345
For loan to Great Britain and Northern Ireland.....	425,000,000	390,000,000	51,404,640
For purchase of Stock—National Defense.....	125,000,001	26,000,001	.....
To drainage, levee, and irrigation districts.....	148,999,799	100,351,789	44,173,031
To railroads (including PWA Securities).....	1,626,986,436	1,049,298,715	643,975,036
For loans and Capital of Mortgage Loan Companies (including \$25,000,000 capital The RFC Mortgage Company and \$11,000,000 capital Federal National Mortgage Association).....	898,942,931	732,676,958	559,387,783
For loans to and capital of insurance companies.....	151,589,750	137,843,210	105,605,228
To building and loan associations (including receivers).....	179,874,559	138,898,068	136,261,221
To public school authorities.....	25,689,050	23,242,175	22,784,900
For Catastrophe rehabilitation loans.....	16,184,521	12,003,055	11,336,594
To state funds for insurance of deposits of public moneys.....	13,087,716	13,064,631	13,064,631
For mining, milling, and smelting businesses.....	19,039,100	8,989,409	3,797,374
For loan to Export-Import Bank.....	25,000,000	25,000,000	25,000,000
For other purposes.....	669,057	614,814	614,814
Total—By Directors of the Corporation.....	\$26,781,684,894	\$20,152,804,201	\$11,827,025,304
Allocations and loans to other governmental agencies and for relief by direction of Congress.....	3,819,327,822	3,529,630,240	3,103,724,772
Grand Total.....	\$30,601,012,716	\$23,682,434,441	\$14,930,750,076

* Includes \$2,782,746,007.21 of Corporation's notes canceled pursuant to Act of Congress, approved Feb. 24, 1938.

† Includes \$46,917,673.99 credited on indebtedness for property taken over for debt.

school authorities; subscribe for and make loans upon nonassessable stock of banks, trust companies, insurance companies, mortgage loan companies, national mortgage associations, and purchase capital notes or debentures of such institutions; make loans for the carrying and orderly marketing of agricultural commodities and livestock, and exportation of agricultural or other products; and purchase securities from Public Works Administration. See FOOD INDUSTRY under *Prices and Subsidies*.

CHARLES B. HENDERSON.

RECONVERSION OF INDUSTRY. See WAR PRODUCTION BOARD under *Balanced Production*; UNITED STATES under *Postwar Policy Issues*; articles on business, industry. Compare POSTWAR PLANNING.

RECORDINGS. See COMMUNICATIONS under *Telephony*. For A.F.M. Ban on Recordings, see MUSIC.

RECREATION, Division of. See FEDERAL SECURITY AGENCY; JUVENILE DELINQUENCY.

RED ARMY. See UNION OF SOVIET SOCIALIST REPUBLICS under *History*; WORLD WAR.

RED CROSS, American National. The year 1943 was the most active in the history of the American Red Cross since its organization in 1881. Acting as the official link between the people of the United States and their Army and Navy it reached into every part of the world where American service men were on duty.

By the end of the fiscal year 1943, the Red Cross had approximately 3,000 workers overseas, with many more trained and awaiting transportation. It had established 200 clubs in leave areas

the American Red Cross at the request of the Army and Navy, which asked for a total of 4,000,000 pints during the year 1943. Through the Red Cross Nursing Service, approximately 40,000 nurses had been recruited for the Army and Navy Nurse Corps by December, 1943.

According to the Red Cross annual report for 1942-43, Red Cross Field Directors, overseas and at home, assisted by camp, hospital, and liaison workers, helped solve the problems of 2,409,220 service men or their families, and of 90,765 ex-service men and families. Home Service workers attached to the Red Cross chapters served 1,410,204 service men or families, 135,488 ex-service cases, and 160,353 civilians. Red Cross Public Health nurses made 680,932 visits to or in behalf of 183,571 cases.

More than 3,800,000 workers in the Volunteer Special Services of the 3,757 chapters and 6,084 branches gave the staggering total of more than 256,000,000 hours of volunteer service. The Motor Corps, during the report period from July 1, 1942, to June 30, 1943, made 1,524,000 calls. The Canteen Corps served 13,200,000 meals. Production workers made more than 613,000,000 surgical dressings, 2,215,000 soldiers' overseas kits, and more than 17,000,000 garments. The Red Cross trained and certified 11,947 Hospital and Recreation Corps workers, 34,389 Staff Assistants, 20,057 Motor Corps members, 65,030 Canteen Corps and 1,550 Home Service Corps workers, and 65,000 Nurse's Aides.

During the same period the Red Cross gave certificates to trainees in Home Nursing, 533,483; First Aid, 2,743,506; Life Saving, 72,457; Swimming, 148,757, and Nutrition, 221,959.

The Red Cross gave relief in 178 disasters in the United States, giving assistance to more than 119,000 persons. Foreign war relief sent abroad since the beginning of the war reached a total of more than \$75,000,000 worth by June 30, 1943, with more than 35,000,000 war victims aided to that date, the relief shipments being made up of Red Cross goods and supplies and goods and supplies bought with funds allocated by Congress for that purpose.

As part of the international organization of the Red Cross, the American Red Cross was able to forward 17,354,903 standard food parcels and other aid for prisoners of war, for distribution through the International Red Cross Committee.

More than 17,000,000 boys and girls, enrolled through the schools in the American Junior Red Cross took part in the wartime program.

The President of the United States is, upon acceptance of the office, president ex-officio of the American Red Cross. Norman H. Davis is chairman of the Central Committee, composed of 18 members, of whom six are appointed by the President to represent the United States Government. See GREECE and POLAND under *History*.

REDISTRIBUTION ORDER. See BUSINESS REVIEW.

REFORMED CHURCH. See RELIGIOUS ORGANIZATIONS.

REFRIGERATION AND AIR CONDITIONING. Food rationing and its corollary, Victory gardens, some day may be credited with giving refrigeration an enormous impetus. The public, years ago, accepted the domestic mechanical refrigerator as a necessity; more recently locker plants where large quantities of foods, especially for farmers, could be stored at low temperatures, came into prominence and now total over 4,600 plants. But more far-reaching possibilities of refrigeration were brought to the attention of laymen during 1943, when gardeners in unprecedented numbers were faced with the problem of preserving their harvest which flowed in too fast to consume and which, because of the shortage of pressure cookers, they had difficulty in canning. It was then that more and more people awoke to the desirability of a large refrigerated storage box at low temperatures where garden products, meats, berries, and fowl could be preserved with very little work other than cleaning when the food was frozen at (say) -20° Fahr. and then held at (say) zero. While locker plants are advantageous to farmers especially, the disadvantage is the distance he must go to place or receive his food. A home freezer is much more convenient. Furthermore the cost, both first and operating, is well within reason and the owner can show a net profit in addition to the convenience. The first cost averages about \$200; yearly costs, including depreciation, are \$50. Further, studies at Cornell University indicated that "Some cooked frozen vegetables may be as high in ascorbic acid content as are cooked fresh from the garden vegetables and higher than cooked so-called fresh market vegetables."

The foregoing, however, is a trend and this development will probably not attain its full fruition for some years. On the other hand, use of refrigeration for food preservation in the conventional sense was never in such demand as during 1943, largely because of the enormous shipments of food to all parts of the world. A fair proportion of the refrigeration industry's output was devoted to installations in merchant vessels; mobile refrigeration trailer fleets are in use in some of the tropical countries where American armed forces are

operating; frozen food plants were operating at peak output; the Army Quartermaster Refrigeration Department operated complete ice-making plants at various bases, and refrigerated railway cars were in practically continuous operation. In connection with the last, Canadian railroads during the year experimented with placing the ice overhead in refrigerated cars so as to conserve space.

Although some years ago there were a few refrigerating systems for air conditioning installed using ice, the vast majority of air conditioning installations are of the electric compressor type. During 1943, however, headway was made in the adaptation of the absorption refrigeration cycle to air conditioning. With this method the energy put into the system is in the form of heat. One such system is the Servel, a variation of that company's gas refrigerator, which the company announced would be available as a year-round air conditioner during the postwar period. Gas flame will be used as a source of energy to operate the refrigeration cycle for cooling the building in the summer and the same flame will be used to generate steam for heating in the winter. The unit will be available for houses. Another manufacturer will also have absorption systems ready for postwar distribution in which any source of heat, including steam, can be used, and this will be available both for the larger houses and for all sizes of commercial and industrial applications for summer or year-round air conditioning.

During the 19th century Lord Kelvin proposed that a refrigeration machine could efficiently be used for heating as well. Experimental work on the idea was continued during the early 1930's but has made little headway due to the cost of electric energy and to some technical handicaps. The advantage of this system is that most of the heat put into the building can be abstracted from the cold outside air and pumped to higher temperature levels. This heat costs nothing, but the electrical energy to pump the heat must be paid for at a high rate. It became increasingly apparent during 1943 that the increased electric generating capacity installed by electric utilities during the war would probably result in an improved rate structure after the war, thus making the heat pump a practical device for year-round air conditioning by electricity.

Probably the most striking contribution of the refrigeration industry to the war has been the development of refrigeration for purposes other than food preservation. Many of these applications are in the industrial field, such as the cooling of a fluid or batch of material. Important 1943 installations of this type included the application of air conditioning in the manufacture of serum albumin, in which refrigeration cools to 34° F. the storage room for incoming blood; chills the process room to 23° F. so as to control the temperature of the solutions, hydrogen iron concentration and alcohol concentration; refrigeration is also used in this process for cooling the alcohol solutions, precipitation mixtures, and the centrifuges. Refrigeration was applied to chill coolant on machine tools to prevent evaporation and forming of mist; and to maintain constant temperature in gage rooms where accuracies of .0005 in. or less are necessary. The reason for this is that metal will expand and contract as much as .0003 in. in a 7½° temperature range, which would make gages highly inaccurate if kept in an uncontrolled temperature.

Several testing chambers where man-made stratosphere temperatures can be maintained were in-

stalled for testing lubricants, plane parts, shells, and guns. A modern bomber rising from sea level to 40,000 feet may experience a drop in temperature of 140° in 10 to 12 minutes. This causes a terrific shock contraction of all metals so that a test chamber is desirable for a full understanding of the effect of this temperature change on plane parts and equipment. The development of these chambers raised severe insulation and refrigeration problems which have been or are being solved. The resulting data will be useful in the postwar period in studying frozen foods, destruction of bacteria, preservation of living tissue, and treatment of diseases. Further headway was made during the year in the cooling of resistance-welding electrodes. Basic reason for refrigerating welding electrodes is that the temperature of the electrode face must be held below the fusion point of the electrode metal or the electrode will "alloy" or pick up the metal being welded. (Also see HEATING AND VENTILATING; ELECTRICAL INDUSTRIES. For use of refrigeration as an anesthesia, see MEDICINE.)

CLIFFORD STOCK.

REFUGEES. The occupation of Southern France by the Germans in December, 1942, virtually sealed the doom of the refugees trapped in Axis Europe. Clandestine exits were still open over the Pyrenees for the physically strong, who escaped even during the winter months over the mountains into Spain at the rate of 100 daily. Most of these were Frenchmen seeking egress to North Africa to join the French forces there, simultaneously to escape recruitment in forced labor in Germany. Included among them, however, were some refugees from Central and Western Europe, German and Austrian Jews, Poles, Czechs, Belgians, and Dutchmen.

These had escaped the terrors of Germany's final drive to deport non-Aryans from Western Europe to oblivion in the east. This effort was initiated in Paris in August, 1942, spread quickly to the Low Countries and Southern France and finally affected not only the refugees of Central Europe, but many Jews who were nationals of Western European countries. All but children under two years were taken, first to concentration camps and then to deportation trains, the sick and the infirm, the aged and the young. Families were separated ruthlessly and the deportees dispatched to unknown destinations in Eastern Europe with minimum supplies of food and personal equipment. By the end of 1943 it was generally conceded that most of the 160,000 Central European refugees who had sought refuge earlier in Western Europe and had been unable to escape to Palestine or overseas countries in the Western Hemisphere had been transported eastward. Some 10,000 to 20,000 found temporary surcease in the Italian occupied region of Southern France, only to face similar terrors when the Italian troops departed after the surrender of Italy in the fall of 1943.

The Allied occupation of North Africa brought new hope to some thousands of refugees of many nationalities who had managed to reach that area. Although emigration was impossible, practically all, including over 5,000 Spanish refugees, were released from internment and secured employment under the Allied armies. The Spanish refugees in North Africa were but a small contingent of the 120,000 who remained in France under the German occupation.

The deportations in Europe, underground re-

ports of mass executions and deaths from starvation in Eastern Europe, and realization that emigration from the continent to Palestine and overseas countries had virtually stopped resulted in public clamor in England and the United States for governmental action to rescue Jews from Axis control before the repeated German promise to exterminate them could be effected.

The Anglo-American Conference which met in Bermuda in April, 1943, to consider the problem, found no evidence that the Axis powers would release refugees from Europe and reported that shipping facilities were lacking to remove substantial numbers. Consideration was given to the problem of facilitating the escape of refugees to the neutral countries—Sweden, Switzerland, Turkey, and Spain—and recommendations were made to the British and American governments that the Intergovernmental Committee, formed by the Evian Conference called by President Roosevelt in 1938, be enlarged and that its mandate be extended. The Intergovernmental Committee met in London in August, 1943, and agreed to assume responsibility for all refugees, wherever found, who had been obliged to leave their homes because of danger to their lives and liberties on account of their race, religion, or political beliefs.

The hope that neutral countries might be assisted to receive further refugees was unfulfilled with two exceptions: 6,000 refugees from Denmark reached safety in Sweden after the occupation of Denmark in the fall of the year, and 1,000 Danish refugees had previously been deported to the east. Sweden had previously accepted 20,000 Finnish children, 15,000 Norwegian refugees, and 4,000 refugees from Germany.

On the surrender of Italy, Switzerland, already host to 30,000 refugees from Central Europe, received 30,000 additional in flight from Southern France and Northern Italy including some Italian military personnel. The change of status of Italy in the war precipitated a new movement of refugees in the Near East. Some 10,000 refugees from the Island of Samos and the Dodecanese group fled from German occupation to Syria and Palestine.

This new flux of refugees strained the already overburdened relief agencies in the Near East. In 1942 over 33,000 refugees from the eastern provinces of Poland had reached Teheran through Soviet Russia. Approximately 1,200 of this group finally reached Palestine by way of Karachi and Bombay, India. Some 21,000 were placed in temporary camps in East Africa and 1,500 crossed the Pacific to Mexico to await repatriation to Poland after the war.

The problem of displaced persons created lively discussion at the first meeting of the Council of the United Nations Relief and Rehabilitation Administration at Atlantic City, N.J., in November, 1943. See RELIEF AND REHABILITATION. An estimate was presented that 21,000,000 persons were displaced from their homes in Europe, approximately two-thirds beyond the boundaries of their own countries. This estimate did not include figures of persons displaced in the western areas of Soviet Russia occupied by Germany. The largest groups identified were some five to six million forced laborers in Germany and one and a half to two million Allied prisoners of war.

The problem of war refugees in the Far East was declared to be comparable in size to that in Europe. There has been substantial movement from the eastern and central areas of China to the northwest and the southwest. Many thousands

ALLIED GOVERNMENTS' ESTIMATES OF HOMELESS OR DISPLACED PERSONS—PRESENT LOCATION

Country of Origin	Germany & Austria	Poland	Russia	France & No. Afr.	Spain & Portugal	Sweden	Norway	Greece & Yugo- slavia
Baltic States.....	80,000	130,000	127,200					
Belgium.....	677,000	126,000	3,500	28,300	2,050	.....	.....	120,000
Bulgaria.....	20,000							
Czechoslovakia.....	831,000	200,000	36,000	25,000	250	650		30,000
Denmark.....	34,000						4,000	
France.....	1,829,000	216,000			14,000			
Germany.....		245,000		500,000			3,000	
Greece.....	25,000							
Hungary.....	27,000							17,000
Italy.....	414,500			90,000			1,000	
Netherlands.....	529,500	150,000	2,000	53,000	200			
Norway.....	3,000	1,200				17,000		
Poland.....	2,450,000		692,000	16,500	620	130		500
Rumania.....	14,000	190,000	250,000					
Russia.....	800,000						45,000	25,000
Spain.....	8,500			150,000				
Yugoslavia.....	419,207	170,000						
Grand totals.....	8,161,707	1,428,200	1,110,700	862,800	17,120	17,780	53,000	192,500

* Includes Luxembourg.

of overseas Chinese have fled from Burma, Malaya, French Indo-China, Thailand, and the Dutch East Indies to India, Australia, and China.

The 44 governments meeting at Atlantic City recognized the postwar problem of displaced persons to be commensurate in size and complexity to the problem of relief itself to the impoverished populations of war-torn Europe and the Far East. The dangers to health and the maintenance of order, the lack of adequate transport, and the problems of reestablishing industry and agriculture for the production of sorely needed supplies were recognized as elements of an over-all problem that challenged the resources of governments and gave urgency to the effort to organize united action for relief.

See BOHEMIA AND MORAVIA, DENMARK, and the other German-occupied countries, and also MEXICO, SWEDEN, SWITZERLAND, under *History*; LEAGUE OF NATIONS; RELIEF AND REHABILITATION; UNITED NATIONS; WAR RELIEF CONTROL BOARD; also see interested groups listed under *SOCIETIES*.

GEORGE L. WARREN.

REHABILITATION. See ARMED FORCES. For Army and Navy Rehabilitation Centers, see PRISONS. For Office of Vocational Rehabilitation, see under *Vocational*. For foreign rehabilitation programs, see separate countries under *History*.

RELIEF. Relief activities within the United States, which were an important feature of the prewar years, have either become unnecessary as a request of all-out production for war or have been supplanted by permanent welfare programs. The Federal work relief programs, notably the Civilian Conservation Corps, National Youth Administration, and Work Projects Administration, were in process of liquidation in 1943. Continuing Federal programs are the three types of public assistance described under SOCIAL SECURITY BOARD and aid to farmers in the form of loans (see AGRICULTURE). State and local programs continue in the field of "general relief" without the aid of any Federal funds (see the table under SOCIAL SECURITY BOARD).

Private welfare activities are described under PHILANTHROPY; SOCIETIES AND ASSOCIATIONS; and articles on churches and other organizations.

Relief for war sufferers in various parts of the world continued on unprecedented scale in 1943. See the statistics under WAR RELIEF CONTROL BOARD; relief groups listed under *SOCIETIES*; the Federal activities described under RELIEF AND REHABILITATION; REFUGEES.

RELIEF AND REHABILITATION. The Office of Foreign Relief and Rehabilitation Operations, under the direction of Herbert H. Lehman, spent much of 1943 in preparing for the work ahead in areas liberated from the enemy. The organization built staff, gathered data on the needs in the various occupied countries, and did some stockpiling. It developed fortified supplemental foods, packaged medical units, and economical relief clothing. The OFRRO Committee on Health and Medical Care labored to gather and analyze available information concerning disease prevalence and important health problems in areas which may be reoccupied by our armed forces; to appraise the epidemic and other disease conditions which are likely to be an important part of relief and rehabilitation; and to estimate the amount and kinds of essential health and medical supplies and equipment which must be provided.

Policy turned into action when Allied troops took over North Africa and that territory became a field for relief and rehabilitation operations. A survey having revealed that milk for the children was the immediate need, distribution was begun, some 200,000 children receiving slightly under a pint of milk a day. Similar work of emergency and special relief was also undertaken, especially in Tunisia, where distribution of essential supplies to distressed civilians was executed close on the heels of Allied military operations. This distribution was for the most part not gratis but by sale through the normal channels of trade as there the situation indicated a lack of supplies rather than an inability to pay for them. In Algiers and French Morocco members of the OFRRO field mission engaged in the liberation of refugees from internment camps.

By Executive Order of Sept. 25, 1943, OFRRO became a part of the Foreign Economic Administration—along with several other agencies which were merged into FEA at that time.

On November 9 many duties and responsibilities of OFRRO were absorbed by the United Nations Relief and Rehabilitation Administration (UNRRA), which was created when the United Nations and other nations associated with them in the war—in all forty-four—signed an Agreement at the White House. UNRRA was created with a view to giving effect to the determination of these nations that, as stated in the preamble of the Agreement, "immediately upon the liberation of any area by the armed forces of the United Nations or as a consequence of retreat of the enemy the population thereof shall receive aid and

ALLIED GOVERNMENTS' ESTIMATES OF HOMELESS OR DISPLACED PERSONS—(Continued)

Italy	Hungary, Bulgaria, Rumania	Middle and Far East	American Continent	Unspecified Countries	Other Parts of Own Country	Totals	Country of Origin
.....	.....	.....	700	17,000	.....	337,200	Baltic States
.....	.....	.....	.....	.....	.....	854,550	Belgium*
.....	.....	.....	.....	.....	.....	140,000	Bulgaria
2,600	109,000	15,900	14,300	37,350	211,200	1,513,250	Czechoslovakia
.....	.....	.....	.....	.....	.....	38,000	Denmark
.....	.....	.....	.....	32,500	1,350,000	3,441,500	France
.....	.....	.....	.....	395,000	.....	1,143,000	Germany
3,400	40,000	11,776	.....	2,500	160,000	242,676	Greece
.....	.....	.....	.....	.....	.....	44,000	Hungary
.....	.....	.....	.....	.....	.....	505,500	Italy
.....	.....	2,000	400	94,500	.....	831,600	Netherlands
.....	.....	.....	.....	.....	.....	21,200	Norway
3,100	39,050	39,510	6,180	8,720	5,360,000	8,616,310	Poland
.....	.....	.....	.....	.....	217,700	671,700	Rumania
.....	300,000	450,000	.....	.....	.....	1,620,000	Russia
.....	.....	.....	.....	800	.....	159,300	Spain
107,510	9,000	.....	.....	131,700	550,000	1,387,417	Yugoslavia
116,610	497,050	519,180	21,580	720,070	7,848,900	21,567,203	Grand totals

* Includes Luxembourg.

relief from their sufferings, food, clothing, and shelter, aid in the prevention of pestilence and in the recovery of the health of the people, and that preparation and arrangements shall be made for the return of prisoners and exiles to their homes and for assistance in the resumption of urgently needed agricultural and industrial production and the restoration of essential services."

On the day following the signing of the Agreement, an UNRRA Conference opened in Atlantic City. As one of its first acts, the Council appointed Herbert H. Lehman Director General. The Conference further reached agreement upon a practicable program of defined scope, formulated a plan for financing the program, devised a procedure for ascertaining and meeting needs, and organized various committees.

The headquarters of the Administration are in Washington, where an administrative staff of international experts is being brought together.

See most of the belligerent countries, especially ALGERIA, BELGIUM, HAWAII, INDIA, IRAN, ITALY, PUERTO RICO, TUNISIA, under *History*; CHILDREN'S BUREAU; FOREIGN ECONOMIC ADMINISTRATION; UNITED NATIONS.

HERBERT H. LEHMAN.

RELIGIOUS FREEDOM. See LAW under *Decisions Concerning Personal Liberties*; UNION OF SOVIET SOCIALIST REPUBLICS under *History*. For curbs on religious freedom, see GERMANY and the German-occupied countries, and PERU under *History*.

RELIGIOUS ORGANIZATIONS. According to the 1943 *Yearbook of American Churches*, published under the auspices of the Federal Council of the Churches of Christ in America, 67,327,719 of the 133,952,672 persons in the United States (1942 census estimate) belong to one or another of the 256 existing religious denominations. This represents a church membership of 50.3 per cent of the population and an increase of 12.9 per cent for the period 1931-42. Of the total church members, 32,247,084 belong to the larger Protestant bodies (having 50,000 or more members), 16,858,210 to the Roman Catholic Church, and 3,341,652 to the Jewish Congregations.

The table on page 544, reprinted from the publication cited above, lists in alphabetical order the religious bodies in the United States having 50,000 or more members. The 52 churches in this list comprise over 97 per cent of the church membership in the nation, the remaining 3 per cent being divided among the other 204

bodies. For more complete statistics on the larger churches, see the separate articles in this volume supplied by an official of each. See also FEDERAL COUNCIL OF CHURCHES OF CHRIST; JEWISH WELFARE BOARD; and SOCIETIES AND ASSOCIATIONS under *Christian Endeavor, Churches, et cetera*.

RELOCATION CENTERS. See WAR RELOCATION AUTHORITY.

RENDOVA. See BRITISH SOLOMON ISLANDS; WORLD WAR under *War in the Pacific*.

RENEGOTIATION OF WAR CONTRACTS. See BUSINESS REVIEW; JOINT PRICE ADJUSTMENT BOARD; TAXATION.

RENTS, RENT CONTROL. See LIVING COSTS AND STANDARDS; PRICE ADMINISTRATION, OFFICE OF.

REPATRIATION. See IMMIGRATION, EMIGRATION, AND NATURALIZATION. For Repatriated Americans, see JAPAN under *History*.

REPUBLICAN PARTY. See ELECTIONS; UNITED STATES under *Politics*.

REPUBLIC P-47 (Thunderbolt). See AERONAUTICS under *Types*.

RESCUE SERVICE. See CIVILIAN DEFENSE, OFFICE OF.

RESOURCES PROTECTION BOARD. See WAR PRODUCTION BOARD.

RETAIL TRADE. See BUSINESS REVIEW under *Wholesale and Retail Trade*; PRICE ADMINISTRATION, OFFICE OF; articles on products.

RÉUNION. A French colony, 420 miles east of Madagascar. Area, 970 square miles; population (1940), 210,000. Chief towns: St. Denis (capital), 30,762 inhabitants (1936); St. Paul, 21,485; St. Louis, 19,195; St. Pierre, 17,924; Pointe-des-Galets, the principal port. Education (1938): 243 schools and 27,500 pupils. The chief products are sugar (110,700 metric tons, 1940-41), rum, manioc, coffee, vanilla, and spices. Trade (1938): imports 263,900,000 francs; exports 206,400,000 (franc averaged \$0.0288 for 1938). Railways (1940): 90 miles. A governor heads the administration subject to the control of the French Committee of National Liberation in Algiers. Governor, Jean Capagorry.

REVENUE BILL FOR 1943. See TAXATION; also, PUBLIC FINANCE; UNITED STATES under *Congress*. For Revenues, see PUBLIC FINANCE; countries under *Finance*.

REYNOLDS FOUNDATION. See PHILANTHROPY under *Foundation Activities*.

RFC. See RECONSTRUCTION FINANCE CORPORATION.

U.S. RELIGIOUS BODIES HAVING 50,000 MEMBERS AND OVER
[Yearbook of American Churches]

<i>Name of Religious Body</i>	<i>Year</i>	<i>No. of Churches</i>	<i>Inclusive Church Membership</i>	<i>Membership 13 years of age and over</i>
Seventh Day Adventists.....	1942	2,491	186,478	169,135
Assemblies of God.....	1942	4,840	222,730	222,730, Est.
Baptist Bodies:				
Northern Baptist Convention.....	1942	7,365	1,538,871	1,461,027, Est.
Southern Baptist Convention.....	1942	25,737	5,367,129	5,098,772, Est.
National Baptist Convention U.S.A., Inc., and National Baptist Convention of America.....	1942	24,575	3,911,612	3,619,451
American Baptist Association.....	1936	1,064	115,022	93,955
Free Will Baptists.....	1940	1,102	118,371	117,130, Est.
National Baptist Evangelical Life and Soul Saving Assembly of U.S.A.....	1940	176	55,897	49,749, Est.
Primitive Baptists.....	1936	1,726	69,157	68,881
United American Free Will Baptist Church.....	1942	1,712	60,000	52,694
Church of the Brethren.....	1942	1,019	179,843	175,416, Est.
Church of Christ, Scientist.....	1936	2,113	268,915	268,915
Churches of God:				
Church of God.....	1942	1,686	82,462	72,154
Church of God (Anderson, Ind.).....	1942	1,412	83,875	71,293
Church of the Nazarene.....	1942	2,898	180,243	180,243
Churches of Christ.....	1936	3,815	309,551	309,551, Est.
Congregational Christian Churches.....	1941	5,827	1,052,701	1,052,701
Disciples of Christ.....	1942	7,919	1,655,580	1,489,995, Est.
Eastern Orthodox Churches:				
Greek Orthodox Church (Hellenic).....	1942	275	650,000	480,000, Est.
Russian Orthodox Greek Catholic Church of North America.....	1943	250	300,000	200,000
Serbian Eastern Orthodox Church.....	1942	45	110,000	110,000
Evangelical and Reformed Church.....	1941	2,850	662,953	596,658, Est.
Evangelical Church.....	1942	1,983	248,475	238,379
Religious Society of Friends (Five Years Meeting).....	1942	508	69,532	58,258
Independent Fundamental Churches of America.....	1943	435	50,000	50,000
International Church of the Four-square Gospel.....	1942	408	250,000	250,000
Jewish Congregations.....	1936	3,728	4,641,184	3,341,652, Est.
Latter Day Saints:				
Church of Jesus Christ of Latter-Day Saints.....	1941	1,598	816,774	668,667
Reorganized Church of Jesus Christ of Latter-Day Saints.....	1942	563	110,481	99,432
Lutherans:				
American Lutheran Conference:				
American Lutheran Church.....	1941	1,826	547,812	388,072
Evangelical Lutheran Augustana Synod.....	1941	1,126	352,571	267,172
Norwegian Lutheran Church of America.....	1941	2,477	569,112	399,732
Lutheran Synodical Conference of N.A.:				
Evangelical Lutheran Synod of Missouri, Ohio and Other States.....	1941	4,326	1,320,510	930,791
The Evangelical Lutheran Joint Synod of Wisconsin and Other States.....	1942	745	315,560	188,447
The United Lutheran Church in America.....	1941	4,046	1,709,290	1,223,222
Mennonite Church.....	1942	445	51,879	50,000
Methodist Bodies:				
African Methodist Episcopal Church.....	1942	7,265	868,735	667,035
African Methodist Episcopal Zion Church.....	1936	2,252	414,244	332,376
Colored Methodist Episcopal Church.....	1942	4,200	380,000	320,000
The Methodist Church.....	1942	42,206	6,640,424	5,976,681, Est.
Polish National Catholic Church.....	1936	118	63,366	47,921
Presbyterian Bodies:				
Cumberland Presbyterian Church.....	1942	1,088	72,591	50,814, Est.
Presbyterian Church in the United States.....	1942	3,500	546,479	508,225, Est.
Presbyterian Church in the United States of America.....	1942	8,511	1,986,257	1,906,807
United Presbyterian Church of N.A.....	1942	850	190,724	171,652, Est.
Protestant Episcopal Church.....	1942	7,685	2,074,178	1,467,599
Reformed Bodies:				
Christian Reformed Church.....	1942	306	126,293	69,980
Reformed Church in America.....	1942	727	163,835	163,835
The Roman Catholic Church.....	1943	18,976	22,945,247	16,858,210, Est.
The Salvation Army.....	1942	1,515	220,867	96,961, Est.
Unitarian Churches.....	1941	365	61,600	61,600
United Brethren in Christ.....	1942	2,788	425,337	382,804
Totals: No. of Bodies, 52.....		227,463	65,415,047	53,196,774

RHODE ISLAND. A New England State. Area: 1,214 sq. mi. Population: 713,346 (1940 census); 699,-266 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is J. Howard McGrath

(Dem.), inaugurated in January, 1943, for his second two-year term; Lieutenant Governor, Louis W. Cappeli; Secretary of State, Armand H. Coté; Attorney General, John H. Nolan.

RHEUMATIC FEVER. See CHILDREN'S BUREAU.

RHEUMATIC HEART DISEASE. See MEDICINE AND SURGERY.

RHODESIA, Northern. A British protectorate in South Africa. Area, 290,320 square miles. Population (Jan. 1, 1941), 1,881,829, including 15,188 Europeans. Chief towns: Lusaka (capital), Livingstone, Broken Hill, Fort Jameson, Mazabuka, and Abercorn. Education (1940): 20 European controlled schools and 1,914 students enrolled, and a number of noncontrolled schools. There are government schools for natives at Mongu, Mazabuka, Kasama, Abercorn, Lusaka, and Ndola, and a number of

mission schools, many of which receive government grants.

Production and Trade. The chief agricultural products are maize, wheat, tobacco, coffee, oilseeds, citrus fruits, and timber. Mineral output (1939): 215,065 metric tons of copper, 1,556 metric tons cobalt alloy, 12,899 metric tons zinc, 80,187 fine oz. silver, 4,645 fine oz. gold, 384 metric tons vanadium. Trade (1940): imports £5,639,203; exports and reexports £10,936,858. Roads (1940): 8,175 miles.

Finance. Budget estimates (1943): revenue £2,635,000; expenditure £2,890,000. Revised estimates for the year 1942 placed revenue at £2,909,000 and expenditure at £1,903,000.

Government. The Government is administered by a governor, assisted by an executive council. There is a legislative council consisting of the Governor as president, 5 ex-officio members including the secretary for native affairs, 4 nominated official members, 8 elected members, and a nominated unofficial member to represent the interests of the native African community. Governor and Commander in Chief, Sir John Waddington (appointed May 31, 1941). See *CHEMISTRY* under *Foreign*.

RHODESIA, Southern. A British self-governing colony in South Africa. Area, 150,333 square miles. Population (June 30, 1941), 1,448,000, including 1,372,900 natives, 68,954 Europeans, and 6,521 Asiatics and colored. Chief towns: Salisbury (capital), with suburbs, had 51,761 inhabitants (1941 census); Bulawayo, with suburbs, 40,433; Umtali; Gwelo; Gatooma; Que Que; Eiffel Flats, Shabani, Selukwe, Bindura, Fort Victoria. Education (1941): 125,000 students in schools of all kinds.

Production and Trade. Maize, wheat, cotton, tobacco (32,195,000 lb., 1942-43), groundnuts, and fruits are the chief agricultural products. Livestock (1941): 2,633,536 cattle, 285,831 sheep, 150,581 pigs. Butter manufactured by the creameries during 1942 totaled 1,149,000 lb. (1,351,000 lb. in 1941); cheese 496,000 lb. (361,000 lb.). In 1941 the sale of oranges and lemons amounted to 158,462 cases. Mineral output for 1942 was valued at £9,377,166, the chief minerals were gold (760,030 ounces valued at £6,384,255), silver (£16,063), chrome, asbestos, mica, coal, tungsten, tin, and nickel; base metals represented £2,976,848 of the total. During 1943 bauxite deposits estimated at 2,500,000 tons were discovered near Penhalonga, Southern Rhodesia.

The census of industries in 1941 showed £10,641,000 as the value of gross output, £5,460,000 as the cost of materials and fuel purchased, and £5,181,000 for the value of net output; there were 42,380 employees (including 5,185 Europeans), total salaries and wages paid amounted to £3,797,000. Trade (1940): total imports £9,550,701; total exports £13,399,357.

Communications. In 1940 there were 1,361 route miles of railway and 1,588 route miles of supplementary road motor service in operation; 12,557 miles of roads; and 2,769 route miles of airways linked the principal towns.

Finance. Budget estimates (1942-43): revenue £7,050,500; expenditure £9,736,269, including £4,106,105 for war expenditure. The budget (1933-34) provided for an expenditure of £14,948,000, of which more than £9,000,000 was for war expenditure and £3,000,000 for a loan, free of interest, to the British Government. On Mar. 31, 1942, the net public debt outstanding was £19,293,849 (£10,308,150 of this amount represented external debt).

Government. The Government is headed by a governor, assisted by an executive council. There is a legislative assembly of 30 members elected for a five-year term by British subjects over 21 years of age, subject to certain qualifications (23 Unionists and 7 Laborites were elected on Apr. 14, 1939). In October of 1937 a law (authorized by the constitution) was passed providing for the establishment of native councils in native reserves, representative of the local chiefs and native residents, to advise the Governor and manage certain local affairs. Governor and Commander in Chief, Sir Evelyn Baring (app. July 28, 1942): Prime Minister, Sir Godfrey M. Huggins.

History. Early in 1943 the Prime Minister of Southern Rhodesia, Sir Godfrey Huggins, looking ahead to conditions in Africa after the end of World War II, gave his opinion that the Rhodesias and Nyasaland should be grouped, and that the East African territories might form another group. He explained that a gentleman's agreement existed between Rhodesia and the Dominions Office in London by which both agreed not to discuss controversial issues during wartime, but at the end of the war the question of Rhodesia's future would require settlement. See *ASBESTOS*; *GREAT BRITAIN* under *History*.

RHODIUM. See *PLATINUM*.

RICE. The rice crop of the United States in 1943, as estimated by the U.S. Department of Agriculture, was a record yield of 70,025,000 bu., exceeding the 1942 high of 64,549,000 bu. by about 8 per cent and the average crop by 48 per cent. This bumper crop was produced on 1,500,000 acres at the average rate of 46.7 bu. per acre versus 1,450,000 acres in 1942 and 44.5 bu. per acre. According to preliminary figures, the seasonal average price per bushel received by farmers in 1943 was \$1.774 and the estimated value of production was \$124,243,000 compared to \$1.626 and \$104,957,000 in 1942. The accompanying table lists the four rice producing States in 1943.

State	Value	Acres Harvested	Production (bushels)
La.....	\$43,273,000	621,000	23,908,000
Texas.....	36,959,000	396,000	20,196,000
Calif.....	24,272,000	230,000	14,030,000
Ark.....	19,739,000	253,000	11,891,000

RID. Radio Intelligence Division. See *FEDERAL COMMUNICATIONS COMMISSION*.

RIO CHARTER. See *COORDINATOR OF INTER-AMERICAN AFFAIRS*.

RIO DE JANEIRO CONFERENCE. See *PAN AMERICANISM*.

RIO DOCE CORPORATION. See *BRAZIL* under *History*.

RIOM TRIAL. See *FRANCE* under *History*.

RIO MUNI. See *SPANISH GUINEA*.

RIOUW-LINGGA. See *NETHERLANDS EAST INDIES* under *Area and Population*.

RIVERS. See *BRIDGES*; *FLOOD CONTROL*; *FLOODS*; *WATERWAYS*, *INLAND*.

ROADS AND STREETS. Highway work during 1943 was largely in maintenance and repair, especially on routes subjected to war traffic much heavier than that for which they were designed. New roads were mainly for access to war plants and camps. While the total number of vehicles on country roads declined considerably (especially automobiles), the number and weight of motor trucks increased, so that many roads were damaged beyond normal maintenance limits. But

shortage of men, money, and materials prevented heavy repair or reconstruction. Much damage was attributed to lax enforcement of load limit regulations for trucks.

There is little information as to the amount and character of highway freight traffic, but a study by the Public Roads Administration in 1940 indicated 59-billion ton-miles, with 80 per cent on main roads and 20 per cent on local roads. With fewer vehicles and heavier loads these figures may apply for 1943. Main roads represent 12 per cent of the mileage and carry 72 per cent of the vehicle-miles, but average 883 vehicles daily as against 46 for local roads. The Federal speed limit of 35 miles an hour was exceeded by 53 per cent of cars timed. Automatic recorders of vehicles passing 600 counting stations showed an approximate decline of 30 per cent from the number in 1942.

Work of the Public Roads Administration for the fiscal year 1943 was almost entirely on road construction and services directly connected with war activities, the regular Federal-aid program being practically suspended. Only 8,445 miles were built, as against 10,178 in 1942. They included 4,148 miles on the Federal-aid system, 1,056 in elimination of railway grade crossings, 2,836

miles of access roads to war industries and camps, 168 miles in the national forests and 131 miles of miscellaneous construction. There were 187 railway grade crossings eliminated and 196 were protected by signals or other devices. The total cost of all completed work was \$274,801,799, of which the Federal government paid 72 per cent. Of new projects, only 5,861 miles were approved, the lowest in many years, and all but 1,108 miles were for access roads (as above). At the end of the year 6,154 miles of road and 144 grade-crossing eliminations were under construction, at an estimated cost of \$306,423,945.

The latest available statistics on highways in the United States are shown below.

Work on the 1,530-mile Alaska Highway in 1943 has consisted of widening to a 24-ft. gravelled surface, reducing critical grades, and building permanent bridges to replace temporary structures carried away by ice or floods. Civilian traffic has been excluded on account of war conditions and lack of gasoline stations. Both the United States and Canada are planning connections with this highway from the south and east. Work is in progress on the last link in U.S. Highway 95, to form a continuous route between the Canadian and Mexican frontiers.

HIGHWAYS, MOTOR VEHICLES, MOTOR FUEL CONSUMPTION, AND TAXES, BY STATES
(As issued in 1943 by the Public Roads Administration)

State	State-Controlled Highways (1941)		Number of Motor Vehicles (1942)				1942 Motor-Fuel Consumption (gal.)	Motor-Fuel Tax Receipts (1942)	
	Total Mileage	Surfaced Mileage	Total	Automobiles (including taxicabs)	Busses	Trucks and Tractor Trucks		Total	Rate per Gallon ^a (cents)
Ala.....	6,905	6,793	364,870	289,181	4,969	64,584	293,227,000	\$18,438,000	6.0
Ariz.....	3,668	3,063	145,763	113,438	395	27,172	131,353,000	5,261,000	5.0
Ark.....	9,506	8,948	293,532	212,908	769	75,286	206,023,000	12,759,000	6.5
Calif.....	13,047	13,291	2,943,264	2,574,495	4,817	327,689	2,508,715,000	53,931,000	3.0
Colo.....	12,246	10,233	365,665	296,400	1,260	62,200	244,931,000	8,168,000	4.0
Conn.....	2,876	2,857	555,293	483,387	1,592	65,644	337,616,000	9,391,000	3.0
Del.....	3,901	2,145	67,299	55,415	350	10,758	55,502,000	2,030,000	4.0
D.C.....	124		162,010	143,722	2,999	11,942	153,590,000	4,239,000	3.0 ^b
Fla.....	8,121	7,298	509,769	418,161	2,349	80,919	441,377,000	23,851,000	7.0
Ga.....	13,351	7,855	546,268	443,705	3,242	91,942	384,422,000	21,614,000	6.0
Idaho.....	4,916	4,110	160,445	121,852	184	35,070	105,674,000	4,722,000	5.1
Ill.....	11,705	11,662	1,984,722	1,746,717	3,000	220,607	1,444,596,000	40,180,000	3.0
Ind.....	10,203	10,130	1,054,600	898,358	7,516	138,648	719,945,000	26,530,000	4.0
Iowa.....	9,607	9,556	769,187	656,910	475	103,487	543,915,000	13,826,000	3.0
Kans.....	9,879	9,291	626,194	504,311	810	114,808	489,068,000	10,364,000	3.0
Ky.....	9,944	9,609	467,744	382,896	1,177	77,436	297,652,000	14,287,000	5.0
La.....	18,603	15,539	419,048	356,576	3,338	73,638	301,800,000	19,647,000	7.0
Maine.....	9,227	9,060	203,243	157,630	440	42,074	133,981,000	5,119,000	4.0
Md.....	4,415	4,315	494,186	426,277	1,402	62,580	313,454,000	11,313,000	4.0
Mass.....	1,914	1,914	921,777	798,426	5,489	107,868	605,387,000	16,672,000	3.0
Mich.....	9,429	8,903	1,619,059	1,453,040 ^c	5,000	142,387	1,201,530,000	31,620,000	3.0
Minn.....	11,266	11,160	852,383	721,219	732	123,125	557,700,000	19,010,000	4.0
Miss.....	6,276	6,138	253,466	164,453	2,139	61,744	238,066,000	12,650,000	6.0
Mo.....	16,107	15,903	962,077	794,846	3,573	155,769	646,862,000	12,822,000	2.0
Mont.....	6,563	5,803	180,327	128,656	775	45,796	124,119,000	4,755,000	5.0
Neb.....	9,138	8,792	421,685	346,515	508	70,326	242,318,000	11,838,000	5.0
Nev.....	5,356	3,179	52,188	40,225	144	10,037	52,109,000	1,697,000	4.0
N.H.....	3,701	3,600	129,318	96,280	454	31,099	72,692,000	2,892,000	4.0
N.J.....	2,075	1,952	1,123,786	961,929	6,055	140,928	877,084,000	21,698,000	3.0
N.M.....	9,299	6,650	119,538	86,073	1,284	28,559	105,451,000	4,384,000	5.0
N.Y.....	14,894	12,748	2,618,143	2,256,664	9,384	319,990	1,595,094,000	58,710,000	4.0
N.C.....	60,096	33,859	645,511	531,284	1,861	95,822	430,549,000	25,429,000	6.0
N.D.....	7,331	6,340	185,907	142,104	147	51,935	160,008,000	3,336,000	4.0
Ohio.....	18,550	18,515	2,085,502	1,866,278	3,141	193,325	1,469,291,000	52,911,000	4.0
Okla.....	9,111	8,391	556,758	434,489	3,323	109,586	418,567,000	19,398,000	5.5
Ore.....	7,205	6,870	424,636	341,367	982	75,217 ^c	283,141,000	11,935,000	5.0
Penn.....	40,444	33,651	2,178,337	1,887,446	4,656	263,407	1,389,068,000	55,888,000	4.0
R.I.....	870	854	189,986	166,623	619	20,823	119,231,000	3,407,000	3.0
S.C.....	10,759	7,518	336,705	279,012	2,123	49,350	229,027,000	13,325,000	6.0
S.D.....	6,016	5,221	192,153	153,351	156	34,856	150,521,000	4,454,000	4.0
Tenn.....	7,588	7,539	473,858	388,028	3,750	74,285 ^c	361,668,999	24,967,000	7.0
Texas.....	23,891	21,367	1,637,063	1,316,479	1,504	297,912	1,719,392,000	48,373,000	4.0
Utah.....	5,414	4,015	157,264	128,564	603	24,940	114,662,000	4,252,000	4.0
Vt.....	1,884	1,780	89,379	78,866	143	9,487	53,859,000	2,256,000	4.0
Va.....	46,171	32,609	555,966	461,249	1,525	85,218	403,025,000	19,474,000	5.0
Wash.....	6,304	6,050	621,507	514,662	2,130	93,517	450,315,000	18,340,000	5.0
W.Va.....	33,004	14,924	303,582	245,669	1,091	49,476	199,211,000	10,002,000	5.0
Wis.....	10,350	9,663	892,527	736,004	899	144,684	571,469,000	21,167,000	4.0
Wyo.....	4,148	3,833	89,110	66,516	136	20,134	61,864,000	2,481,000	4.0
U.S.....	557,998	455,803	33,002,600	27,868,746	105,410	4,608,086	24,010,326,000	845,803,000	3.99 ^d

^a As of Dec. 31, 1942, unless otherwise noted. ^b Rate changed from 2 cents to 3 cents, Jan. 1, 1942. ^c Taxicabs included with trucks. ^d Weighted average rate.

In 1943, Congress and nearly every State considered legislation affecting highway development, but there was little definite action. State authorities were reluctant to assume great expenditures until there was assurance of adequate funds, since reduction of income has resulted from the reduced number of cars licensed. Shortage of labor led to a limited use of prison labor, and North Carolina proposed the reopening of prison camps.

Highway construction will be a large factor in the postwar employment problem, especially in its wide use of semi-skilled and unskilled labor. But it must be planned for necessary improvements and not as a relief program. It is important that the preliminary work on plans, legal affairs, and financing should be completed well in advance, so that contracts may be let promptly, in order to have work ready for the men released from the fighting forces. A PRA program for postwar construction consists largely of relieving traffic on routes through and around cities, and improving sections likely to form links in a broad system of highways. Projects aggregating 2,500 miles have been approved, and it is expected that Federal funds matched by State funds will permit of a \$500,000,000 construction program.

Five States in 1943 initiated constitutional changes to prohibit the use of funds from road taxes for any but the original purpose of road improvement. In Texas, plans are reported complete for \$26,000,000 of road work that can be put under way within 30 days; this is about 25 per cent of the total road work needed in that State. A Vermont law prohibiting billboards on highway right-of-way was upheld by the State Supreme Court. The original line of the Southern Pacific Railway around the north end of Great Salt Lake, abandoned after the building of a direct line across the lake, has been utilized as a highway; the rails were removed as scrap and plank flooring was placed on the old bridges. In Florida, the 85-mile road to Key West, on the abandoned line of the Florida East Coast Railway, has been completed.

As a contribution to war work, flight strips along public roads, but not necessarily paralleling them, have been constructed in several cases. They serve for military use, to provide route markers, and to provide facilities near small towns having no airports. They may be developed later as aids to civil aviation. In general they are about 8,000 ft. long and 500 ft. wide, with paved runways 4,000 × 150 ft. Nearly all State highway departments have laboratories for testing materials and for experimental work, and much research has been carried on, particularly as to surfacing and subgrade conditions. The great value of a strong base or foundation is shown by the way in which old roads in England have stood up under the severe conditions of war traffic.

City streets will require much postwar attention, as they have suffered severely in many cases from excess of heavy traffic, heavy loads, and inability to obtain men and materials needed for maintenance, repair, and repaving. Changes in and extension of street layouts, as well as street widenings, will be involved in improving city plans and in the clearing and rehabilitation of slums and blighted areas. Similar work will be included in new housing and subdivision projects, where street plans are sometimes on the rectangular block system, but perhaps more often on an irregular layout, with curved streets, depending somewhat on the topography of the site. The Federal Housing Administration (q.v.) is interested

in such projects, since it insures housing mortgages. Therefore, it has issued general recommendations as to layout of major and minor streets, and also as to street and sidewalk paving. These last provide for roadways 26 ft. wide between curbs and 50 ft. between lot lines.

Projects for high-speed roads with few cross-road intersections (known as express-ways, free-ways, super-highways, limited-access roads, or arterial streets) are becoming numerous, but mainly in relation to traffic in and near cities. Long-distance projects, similar to the 160-mile Pennsylvania Turnpike, are mainly in the preliminary stages. In relation to streets, however, these projects are special features designed to provide rapid and uninterrupted movement of traffic that must needs pass to and from main highways or through the city. These include depressed and elevated streets and separation of grades at intersecting streets, together with a minimum of points of access to the high-speed street.

At Detroit, it is proposed to extend the outlying "industrial express-way" across the city. Chicago has plans for several radial super-highways (elevated or depressed) having 8-lane roadways; these would aggregate 70 miles at a cost of \$205,000,000, of which the initial stage would be 32 miles. Denver is building a 5-mile line having two 32-ft. separated roadways and two 2-lane parallel roads for local service. Cincinnati is building a 2½-mile depressed line to Lockland along the bed of the old Miami & Erie Canal, with two 24-ft. lanes and a 4-ft. separating strip. At Baltimore, the new Patapsco River bridge is part of a planned 8-lane express-way through the city to form a link in the Atlantic States Super-highway.

At Pittsburgh, an express-way now being built is to extend northward about 7 miles, with two 24-ft. lanes and 6-ft. dividing strip on an 80-ft. right-of-way. That city has also the Duquesne express-way extending along the Allegheny River and passing under all the river bridges; parallel with it, on the land side, are two 30-ft. roads for local traffic, separated by a viaduct carrying the Pennsylvania Railroad. At Philadelphia, a combined city and State program for 1944 includes wide streets to the municipal airport and the South Philadelphia industrial district, with later plans for improved routes to the Navy Yard and the Delaware River bridge. Included in the postwar plans at New York is the landscaping and gardening of new links in the Brooklyn-Queens system of parkways, which is exclusively for passenger travel.

In Canada, the U.S. Army is building a road from the Peace River (in Alberta) to the mouth of the Mackenzie River on Great Slave Lake, in connection with the supply of Canadian oil for Alaska. The 153-mile closing link in the Trans-Canada highway, between Hearst and Geraldton, Ontario, was completed in July. There are no gasoline stations as yet, so the road is not open for tourist travel. Another Canadian project is a 156-mile road from Champlain, New York, to the Quebec Bridge, by-passing all towns to provide for rapid travel between Quebec and New England points. A curious project is for a road on a causeway or embankment across Canso Strait to replace existing ferry service between Cape Breton Island and the mainland of Nova Scotia.

On the Central American section of the Inter-American highway, from the Mexican border south to the Panama Canal, the U.S. Army has stopped work on its 250-mile stretch in Costa Rica, having

more important work elsewhere. When the war began, there was obvious advantage in an overland route to the Panama Canal, avoiding the risks of the sea route. Of the 1,570 miles, about 1,000 miles were completed, but in disconnected sections and of various types. For the necessary links, Congress agreed to pay 66 per cent of the cost—the Army to build them rapidly as pioneer trails, and the Public Roads Administration to finish them as permanent roads. Under present conditions, such a road seems to have no emergency value, but the PRA will continue its work, assisted to some extent by the several countries. The Trans-Isthmian Highway, parallel with the Panama Canal, was completed in 1943.

Mexico is completing a modern road from Nuevo Laredo, on the Rio Grande boundary, to the Guatemala frontier, and has a 420-mile project for roads connecting Torreon and Durango with the Pacific port of Mazatlan. On the South American section of the Inter-American Highway there has been little progress, but the PRA has planned some 525 miles of lateral or branch roads. In Venezuela, a 750-mile road was opened, with concrete paving for 150 miles and the remainder to be so paved within four years. Bolivia plans a 400-mile road from Cochabamba (Elev. 8,600 ft.) to Santa Cruz (Elev. 1,200 ft.) to link an existing railway between the Pacific port of Arica and Cochabamba, with another railway from the Atlantic port of Santos, Brazil, now being extended to Santa Cruz. This highway link will be built in less time and at less cost than a railway in mountain country.

In Colombia, a 512-mile road is planned from Bogota to Carreno, on the Orinoco River, to open up forests of rubber trees. With the expected early completion of a 500-mile road north from Lima, Peru, across the Andes to Pucallpa, head of navigation on the Ucayali River, the time of transport from Lima to Iquitos, on the Amazon, will be reduced from 30 days to 5 days. These projects indicate, by their lengths, the needs of intercommunication throughout South America, but their development will be slow.

The Burma Road being blocked by Japanese invaders at its western end, the United States forces are building a jungle link from a point in Assam southeast to reach the Burma Road and thus open an emergency route from India to Chungking, temporary capital of China. A new link in the road from Chungking to Kwangyuan (Szechuan), opened in March, shortens the distance from 580 miles to 386 miles.

See BRIDGES; STATE LEGISLATION; TUNNELS. For highway mileages and new construction, see the various foreign countries, under *Transportation*. Compare MOTOR VEHICLES.

E. E. RUSSELL TRATMAN.

ROCKEFELLER FOUNDATION, The. Chartered in 1913 for the permanent purpose of "promoting the well-being of mankind throughout the world." The present program of The Rockefeller Foundation is concerned with certain definite problems in the medical, natural, and social sciences, the humanities, and public health. For work in these fields the Foundation appropriated in 1943 approximately \$7,685,000.

Medical Sciences. In the medical sciences the Foundation's interest centers mainly on research and teaching in the field of nervous and mental diseases and on the improvement of medical services. Its appropriations in 1943 for work along these lines included \$96,000 to Harvard Univer-

sity, \$50,000 to New York University, and \$150,000 to McGill University for the development of teaching and research in psychiatry; \$190,000 to Johns Hopkins University for research in psychiatry; \$20,000 to the American Psychiatric Association for expenses of its Committee on Psychiatric Nursing; \$17,000 to the Judge Baker Guidance Center toward support of a children's psychiatric consultation center; \$8,200 to the American Association of Psychiatric Social Workers toward the maintenance of a War Service Office to handle personnel problems; \$16,440 to the Pennsylvania Hospital for studies on apraxia and related phenomena in children; \$9,750 to the University of Cincinnati for research in neurophysiology; \$20,750 to the University of Edinburgh for research in neurosurgery, neurology, and psychiatry; \$30,000 to Medical Administration Service, Inc., New York City, a voluntary association established to study and promote methods and plans for more economical and effective medical prevention and care; \$50,500 to Group Health Cooperative, Inc., New York City, toward the development and operation of medical insurance programs; \$100,000 to the University of Chicago for research in industrial diseases and health conservation plans; \$15,000 to Harvard University for the development of legal medicine; \$25,000 to introduce teaching of hospital methods into hospitals of the Eighth Service Command, Dallas, Texas; \$20,000 to the American Library Association for a survey of the Army Medical Library.

Natural Sciences. The program in the natural sciences is concerned mainly with experimental biology. Among the appropriations in this field in 1943 were \$30,000 to the University of Pennsylvania for work dealing with evolutionary changes in Sciara insects; \$7,500 to the University of Wisconsin for research in immunogenetics and \$19,500 to Iowa State College for research in physiological genetics; \$43,500 to Columbia University for investigating problems of intermediate metabolism; \$9,775 to the Institute of Andean Biology, Lima, Peru, for studies on animal fertility in the high Sierra regions; \$44,000 to the Jackson Memorial Laboratory for establishing and maintaining a Mammalian Stock Center and for research in the transference of living ova; \$20,000 for the expenses of putting into effect an agricultural program in Mexico; \$30,250 to the Ministry of Public Health in Uruguay toward construction and equipment of a laboratory for the Research Institute of Biological Sciences; \$20,000 to Washington University for research in general physiology and experimental embryology; \$9,000 to the University of Illinois for researches on the biochemistry of amino acids; \$13,300 to the California Institute of Technology for investigations of the structure of antibodies and the nature of immunological reactions; \$9,500 to Duke University for research on the physical chemistry of the proteins. Grants were also made in the field of mathematics.

Social Sciences. In the social sciences studies of international relations and war and postwar problems are receiving major emphasis. In general aid is given to projects contributing to the understanding of important social problems and to the development of personnel and methods. Some of the 1943 appropriations were \$150,000 to the Social Science Research Council; \$100,000 to the Foreign Policy Association for its nation-wide program of education and research in international relations; \$56,000 to the Institute of Pacific Relations, \$64,800 to the Royal Institute of Interna-

tional Affairs, \$50,000 to the League of Nations, \$48,600 to the National Institute of Economic and Social Research, \$22,680 to the University of Oxford, and \$15,000 to the Escola Livre de Sociologia e Política de São Paulo, for research activities; \$20,000 to the National Research Council for studies of war and postwar problems in ethnogeography; \$45,000 to Stanford University for a flexible wartime research program in its Food Research Institute; \$105,000 to the National Institute of Public Affairs for recruiting and training personnel for the Federal services; \$70,000 for work in economics at the Institute for Advanced Study; and \$24,000 to Columbia University for a study on the theory of public utility rates.

Humanities. The program in humanities is concerned with studies in language and foreign culture tending toward better international understanding, with regional studies in the United States and Canada, and with such means as drama, radio, motion pictures, libraries, and museums for raising cultural levels of contemporary society. Grants made during 1943 included \$85,000 to the American Council of Learned Societies for developing personnel and resources for teaching modern languages, and \$10,000 to the same institution for a center of English study in the Escuela Normal Superior, Bogotá, Colombia, \$10,000 to Cornell University for intensive summer courses in Russian civilization, \$5,000 to Oberlin College for Far Eastern studies, \$17,650 to the Library of Congress for expanding its Archive of Hispanic Culture and \$12,000 for organizing and developing its collections of Slavic materials; \$15,000 to the University of Saskatchewan, \$14,500 to the University of Chicago, \$8,500 to the University of Kentucky, and \$50,000 to the University of Minnesota for regional American studies; \$40,000 to the Library of Congress for preserving motion pictures, \$6,000 to the National Film Society of Canada, \$12,150 to the American Council of Learned Societies for special microfilming projects; \$8,910 to the National Central Library in London, \$27,500 to the American Library Association for developing a library school in São Paulo, Brazil, and \$13,000 for a union catalogue of library holdings in Mexico City, \$70,000 to the National Institute of Anthropology and History, Mexico, for reorganizing its library resources and developing its teaching and research program, and \$20,000 to the Pan American Union for preparing its files of Latin American newspapers and art materials. Grants were made for the development of special university programs of instruction in the humanities and for protecting cultural treasures in war areas.

Public Health. The Foundation appropriated \$2,200,000 for the work of its International Health Division in 1943. This work included research on a number of diseases, among them, yellow fever, malaria, influenza and other respiratory diseases, typhus, rabies, diphtheria, syphilis, and hookworm; demonstrations in the control of certain of these diseases in their environments; cooperation with governments in the organization or improvement of important services of central or local health departments; and the development of public health education. Considerable attention is given to nutrition surveys. In addition, \$250,000 was appropriated for the use of the International Health Division in supporting the activities of The Rockefeller Foundation Health Commission in connection with war emergency problems.

Officers. The executive officers of the Foundation in 1943 were Walter W. Stewart, chairman of the board of trustees; Raymond B. Fosdick, presi-

dent; Thomas B. Appleget, vice president; Alan Gregg, M.D., director for the medical sciences; Warren Weaver, director for the natural sciences; Joseph H. Willits, director for the social sciences; David H. Stevens, director for the humanities; Wilbur A. Sawyer, M.D., director of the International Health Division; Norma S. Thompson, secretary; Edward Robinson, treasurer; George J. Beal, comptroller; Thomas M. Debevoise, counsel; Chauncey Belknap and Vanderbilt Webb, associate counsels. The offices of the Foundation are at 49 West 49th Street, New York City.

ROCKET PLANES. See AERONAUTICS under *Axis Types*.

ROCKET WEAPONS. See MILITARY PROGRESS under *Weapons*; also *BOMBS*.

RODENT CONTROL. See FISH AND WILDLIFE SERVICE.

ROLL-BACKS. See topics listed under *PRICES*.

ROMAN CATHOLIC CHURCH. See CATHOLIC CHURCH IN THE UNITED STATES; ARGENTINA, BELGIUM, GERMANY, HUNGARY, MEXICO, NETHERLANDS, PERU, POLAND, SPAIN, under *History*; VATICAN CITY.

ROME, Bombing of. See ITALY under *History*; WORLD WAR under *Tunisia-Italy Campaigns*.

ROOSEVELT, President Franklin D. See EXECUTIVE OFFICE OF THE PRESIDENT; NEWSPAPERS; RADIO PROGRAMS; UNITED NATIONS; UNITED STATES; ARGENTINA, BRAZIL, ITALY, LIBERIA, MEXICO, PHILIPPINES, TURKEY, under *History*.

ROPE AND CORDAGE. See WAR PRODUCTION BOARD under *Conservation of Materials*.

ROSE ISLAND. See SAMOA, AMERICAN.

ROSENWALD COLLECTION. See ART under *Art Museums*.

ROSENWALD FUND. See PHILANTHROPY under *Foundation Activities*.

ROSS DEPENDENCY. See NEW ZEALAND.

ROUMANIA. See RUMANIA.

ROWING. Although the Poughkeepsie and Yale-Harvard regattas, rowing's biggest races, were not held, college and club oarsmen enjoyed a fairly good campaign in 1943. Navy, Penn, Columbia, Harvard, Princeton, Cornell, M.I.T., and Rutgers boated crews in the East, while Washington and California kept the sport going on the Pacific coast, where the Huskies from up Washington way won their annual dual regatta with the Bears.

Harvard took the Adams Cup for the sixth year in a row by defeating Navy and Penn. Cornell, a guest starter in the race, finished third ahead of the Quakers. The Childs Cup sprint, contested by Princeton, Penn, and Columbia annually since Civil War days, found two guest crews—Navy and M.I.T.—dominating the competition on the choppy Severn. Navy took an early lead to triumph easily, with M.I.T. second, but the historic trophy went to Princeton, which came home third.

A real college champion was hard to pick, for the honors seemed to shift almost as often as the tide. Cornell, for example, trailed Navy on the Schuylkill, but later defeated the Middies at Annapolis. Columbia and Rutgers each won once in their two dual meetings.

The senior championships of the National Association of Amateur Oarsmen were held in Philadelphia, with Art Gallagher of the Penn A.C. making a one-man show of the regatta. Gallagher competed in five races and was returned a winner

five times. He took the single sculls, quarter-mile dash, Association singles, paired with Charles McIntyre in the doubles, and stroked a victorious Penn A.C. four. The Wyandotes of Michigan won the title for four-oared crews with coxswains. The Barnes Trophy went to the Fairmount Rowing Association of Philadelphia.

THOMAS V. HANEY.

ROYAL AIR FORCE (RAF). See AERONAUTICS; WORLD WAR.

RUANDA-URUNDI, Territory of. See under BELGIAN CONGO.

RUBBER. The story of the 1943 synthetic rubber program will, in years to come, stand as a great, if not the greatest, monument to American ingenuity and industrial achievement. It was made possible by the pooling of secret practices and formulas hitherto guarded as the life blood of the rubber, chemical, and petroleum companies. Its military necessity is reflected in the data that a large bomber contains over 1,200 pounds of bullet-proof rubber in its gasoline tanks; a battleship requires over 100,000 pounds; a medium-sized tank, 500 pounds; and army trucks, used in excavations, may have tires 9.5 feet in diameter totaling 3,000 pounds per truck.

The following statistics were reported in *Chemical and Engineering News* for Sept. 25, 1943, by Bradley Dewey, who on September 29 replaced William Jeffers as Rubber Director. The Baruch Committee in September, 1942, had advised the production of 1,037,000 long tons of synthetic rubber in the United States, and 37,000 long tons in Canada. The September, 1943, program had a rated capacity of 850,000 long tons of synthetic rubber, 79 per cent of the committee's recommendation. This compares with a natural rubber consumption in 1941 of 800,000 long tons.

This miracle of American industry represents a growth, in a little over two years, of an entirely new chemical industry worth three quarters of a billion dollars. In peacetime to have achieved it in fifteen years would have been astounding.

By the end of 1943 there had been made available to essential drivers 5,000,000 synthetic tires, 7,000,000 new tires from frozen stocks, 1,000,000 reclaimed "Victory tires," and 4,000,000 tires turned in under the "idle tire purchase plan." In 1944 essential civilian travel will require a minimum of 30,000,000 tires.

The final rubber program for the United States and Canada calls for 850,000 long tons (100 per cent) of synthetic rubber annually. This will include 735,000 tons (86.5 per cent) of Buna S; 75,000 tons (8.8 per cent) of butyl rubber from isobutylene; and 40,000 tons (4.7 per cent) of neoprene from calcium carbide. On Nov. 10, 1943, Director Dewey pointed to the successful completion of the neoprene program, but indicated that the butyl rubber production for inner tubes had been disappointing—only 35 per cent complete. Especially bad was the fact that the rayon cord for heavy duty tires would not approach full operation for another year.

Buna S or (GR-S). The Buna S production, constituting 86.5 per cent of the total rubber program, will be divided as follows: 83,000 tons (9.8 per cent) from thermal cracking of petroleum; 82,000 tons (9.6 per cent) from butane; 317,000 tons (37.3 per cent) from butylene; and 253,000 tons (29.8 per cent) from alcohol. The scheme calls for a number of "standard unit" plants of 30,000 tons annual production each. By Septem-

ber, 1943, 50 per cent of the rated capacity of butadiene was finished and ready for operation, 80 per cent of the styrene, and 90 per cent of the copolymer. The amazing growth of these plants during 1943 is shown in the increase of production from 38,000 tons of synthetic rubber during the first half year, to 45,000 tons during the month of December alone. The low point in the country's stockpile of crude and synthetic rubber will be reached early in 1944. (GR-S stands for "Government Rubber-Styrene.")

Butadiene. Most dramatic chapter in the 1943 Buna S synthetic rubber program is the fantastic undertaking to produce 688,500 tons of a chemical, butadiene, which a few years ago was an expensive curiosity on the laboratory shelves of a few specialized chemists. This represents 263,000,000 gallons of butadiene, a volume twice the yearly production of ethyl alcohol or ten times the toluene output in 1939. The methods by which butadiene can be produced will now be reviewed.

The *aldol process* worked out in Russia, has presumably been the chief process by which the Germans manufacture their butadiene. In this process, lime and coke made into calcium carbide produce acetylene, which is hydrated in the liquid phase, using a mercury salt catalyst to produce acetaldehyde. The acetaldehyde is then converted into butadiene by the steps outlined below. Or the acetaldehyde may be obtained from ethyl alcohol by dehydrogenating in the vapor phase at 200–350° C. over a copper-zinc oxide catalyst. Ninety per cent yields are achieved. The acetaldehyde so produced is converted to aldol at 0° C. in the presence of dilute alkali; again, 90 per cent yields are obtained. The aldol is easily hydrogenated over a nickel or copper catalyst in aqueous solution at 80–90° C. and a hydrogen pressure of 1,500–3,000 pounds per square inch; yields of 85 per cent are reported. The final step, conversion to butadiene, is most difficult; it is carried out under a phosphate-sulfonic acid catalyst at temperatures below 400° C.; a yield of 90% is realized.

The *alcohol process* is important in Russia. Ostromyslenskii (1915 and 1942) succeeded in fermenting ethyl alcohol directly to butadiene in two steps: dehydrogenation followed by dehydration. Subsequently (1932–42) the Polish scientist, Lebedev, developed a one-step process based on passing the alcohol over a mixed dehydrogenation-dehydration catalyst at 400° C.; employing aluminum oxide and aluminum hydrosilicate for dehydration, and zinc oxide for dehydrogenation. The Lebedev process is capable of wide modifications, which are being applied by Carbide and Carbon Chemical Corporation and Publicker Commercial Alcohol Company. The Office of Rubber Director has approved a 10,000-ton plant; a yield of 5 to 5.9 pounds of butadiene per bushel of grain is estimated. In peacetime alcohol at fifteen cents a gallon, from molasses, could compete with petroleum in producing butadiene.

The *glycol process* developed by the Northern Regional Research Laboratory was considered in the Baruch report. By selectively fermenting corn starch to 2,3-butylene, which can be polymerized at 500° C., this process produces 7 to 7.5 pounds of butadiene per bushel of corn.

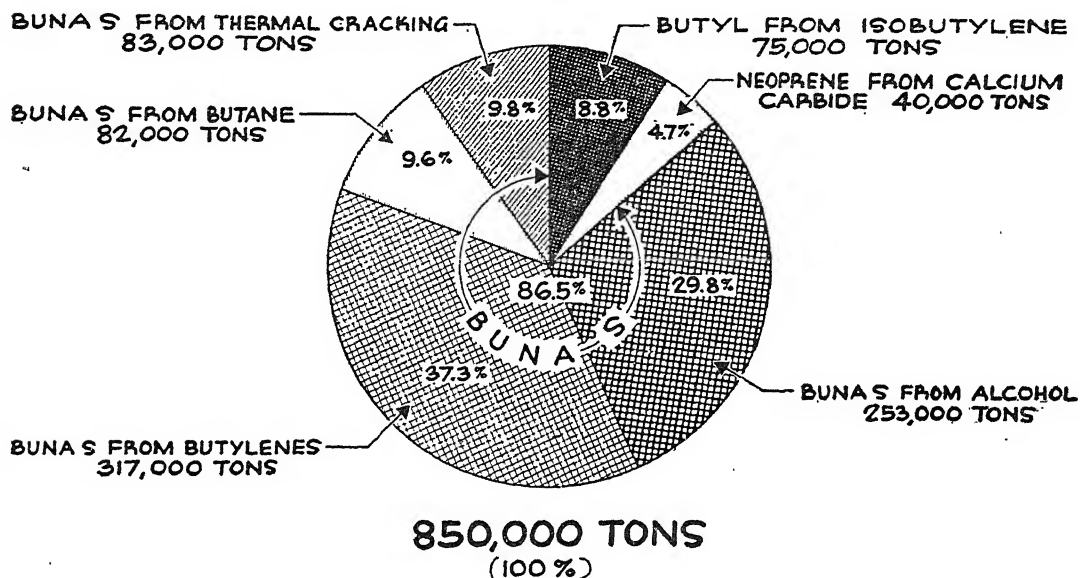
A *chlorination-dehydrochlorination* method, not used in the Government synthetic rubber program, involves the addition of chlorine to butenes, followed by dehydrochlorination.

Petroleum processes are several. Projects for high-temperature cracking, at one time scheduled to produce more than 100,000 tons of "quick

butadiene," were canceled by the Rubber Director in the early fall of 1943, as the following more desirable processes swung into full production. In one new process, butenes are converted directly to butadiene over a catalyst made by the Standard Oil Development Company. Several other petroleum companies have provided additional butene from butane, by processes contributed by the Universal Oil Company, Phillips Petroleum, and the Houdry Catalytic Development Company. Although little technical information has been released on these processes, all of them require reactivation of the catalyst as it becomes covered with coke from the petroleum.

Natural Rubbers. Meanwhile, of course, full production of plantation crudes in Ceylon, Africa, and South America are being realized; but the Latin American countries will contribute less than 50,000 tons of crudes during 1944, and negligible

liams Company have produced *Kempol* from inedible domestic vegetable oils. It holds promise as an extender for many rubbers with which it is compatible. *Koroseal*, familiar polyvinylchloride prewar synthetic, can be bonded directly in order to line tanks. Postwar uses for it include insect screens which may be rolled up like window shades, flexible water pipes for homes, washable and grease-proof wallpaper coatings, and outdoor furniture seats. It is now used as crash padding in tanks; and, recently, as a sponge rubber substitute. *Marvinol*, the thermoplastic vinyl substitute for rubber, is being manufactured by the Glenn Martin Company into inner tubes, surgical gloves, and molded goods. They require no vulcanization. *Norepol*, the rubber-like material synthesized from soybeans and other vegetable oils by the U.S. Department of Agriculture's Northern Research Laboratories, went into production in 1943 at a vol-



SYNTHETIC RUBBER PROGRAM UNITED STATES AND CANADA

Showing rated annual capacities, in long tons, by types of feed stocks.

[From Bradley Davis, Rubber Director, WPB "The Rubber Program" Chemical and Engineering News, Sept. 25, 1943.]

amounts will be obtained from cryptostegia and guayule plantings in the United States.

New Rubbers. What's what in the synthetic rubber field, has been compiled by Halliman in informational letter #7242 entitled "Synthetic Rubber" and published by the Bureau of Mines. This reports the various types of synthetic rubber, their manufacturers, processes, and characteristics of finished products.

An alphabetical list of the new rubbers or new developments which were announced in 1943 follows. *Agripol*, a synthetic rubber from soybeans by Reichhold Chemicals, Inc., will reach an annual production at the end of 1943 of 25,000 tons. It is inferior to natural rubber in tensile strength and abrasive resistance, but its static properties are superior to other products. It is obtained when fatty acids from soybean oil are polymerized with ethylene glycol, obtained from dehydrated ethyl alcohol. *Ameripol* (see YEAR BOOK for 1941, p. 107) has been produced this year in a form which remains flexible even at -70° C. Sherwin-Wil-

ume of 12,000 tons. Its stretch is only one-third and its tensile strength only one-sixth that of natural rubber, but it is used for shoe heels, gaskets, and other uses requiring resistance to abrasives.

Paracon is a war baby elastomer delivered by the Bell Telephone Company. It is prepared by the condensation of dibasic acids with glycols or by condensation of hydroxyacids. It differs from other ester rubbers such as *Norepol*, *Kempol*, etc., in the method of vulcanization, and in being made from relatively pure intermediates which permit higher degree of condensation, with corresponding favorable gains in tensile strength and elongation. However, the intermediates are too special to compete with butadiene rubber; and *Paracon* will, therefore, remain a specialty product. With long-chain dibasic acids, products with very low brittle points are obtained; with short, highly polar acids, elastomers with remarkable resistance to oils are produced. Its poor electric properties, low resistance to acids, alkalis, and steam limit its application.

Reilly Tar and Chemical Corporation is now producing the pyridine analog of styrene, *2-vinylpyridine*, whose copolymers with butadiene and/or styrene were investigated. *Sponge rubber* using synthetic instead of natural rubber, is replacing the "air foam" now produced by Good-year for military purposes. *R-196—Syntoflex*, developed by Felt Products Manufacturing Company, is being applied as a synthetic rubber strip in fuel tanks wherever a high resistance to water compression and abrasion are required. *Uskol* was announced by the U.S. Rubber Company. *Wit-cogum*, developed from vegetable oil by Wisniet-Tumpeer, shows promise as a chemurgic rubber which may be used independently or blended.

Reclaim. The reclaim industry more than quadrupled its capacity during the year. Heavy duty tires for trucks for military combat still require 10 to 20 per cent crude rubber, and authorities were unanimous in stipulating the use of a rayon in place of a cotton tire cord for heavy duty service.

Postwar Rubber. Will it be natural or synthetic? Synthetic rubber at 15¢ a pound at least will peg natural rubber to a low price. Synthetic rubber can be tailor-made, with temperature and ingredients controlled to give a desired set of properties; natural rubbers differ widely in properties made as they are in the tree at the mercy of wind, sun, and rain. Synthetic rubber is inferior to natural rubber in some respects, but these differences are diminishing. After the war, however, some natural rubber will still be required in heavy duty tires. In a year's time, each factory worker can produce 100 tons of synthetic rubber while the oriental gathers a single ton of natural rubber; this is an interesting angle to the question of wages. Preparedness may dictate synthetic plants in readiness at all times. These are a few of the many aspects which will finally determine whether the new synthetic rubber equipment will remain after the war.

See BRAZIL, COSTA RICA, HONDURAS, and other tropical American republics under *History*; CHEMICAL INDUSTRY; CHEMISTRY under *Petroleum* and *Petroleum Gases*; NATIONAL BUREAU OF STANDARDS; UNITED STATES under *Production*; WAR PRODUCTION BOARD under *Substitution*.

HUBERT N. ALYEA.

RUBBER DEVELOPMENT CORPORATION. See HAITI under *History*.

RUBBER DIRECTOR. See RUBBER; UNITED STATES under *Production*.

RUBBER RESERVE COMPANY, U.S. See RECONSTRUCTION FINANCE CORPORATION.

ROMANIA. A monarchy of southeastern Europe. Capital, Bucharest. King, Michael I, who ascended the throne Sept. 6, 1940, upon the abdication of his father, Carol II.

Area and Population. As a result of successive territorial cessions made during 1940, the area of Rumania was reduced from 113,884 square miles to about 74,884 and the population from an estimated 19,422,600 to 13,493,000 at the census of Apr. 6, 1941. The recovery of Bessarabia (area, 17,100 sq. mi.; pop., 3,200,000 in 1939) and Northern Bukovina (area, 2,300 sq. mi.; pop., 500,000 in 1939) in July, 1941, as a result of the German-Russian war gave Rumania a total area of about 94,284 square miles and a population officially estimated at 17,018,000 in October, 1941. A decree of Oct. 18, 1941, incorporated in Rumania a part of Russia proper east of the Dniester, including the city of Odessa.

The territories permanently ceded by Rumania were Northern Transylvania (area, about 19,300 square miles by Rumanian estimate; population, 2,385,987) and Southern Dobruja (area 2,982 square miles; population, 378,344). Northern Transylvania was ceded to Hungary on Aug. 30, 1940, and Southern Dobruja to Bulgaria on Sept. 7, 1940. About 1,150,000 Rumanians and 1,200,000 Magyars and other non-Rumanians were estimated to have been ceded to Hungary with Northern Transylvania, while Bulgaria obtained an estimated 78,000 Rumanians and 300,000 non-Rumanians in Southern Dobruja. Rumanians comprised an estimated 85 per cent of the kingdom's total population in 1941 as against 72 per cent prior to the 1940 partition. Minority groups in 1942 included about 507,000 Germans, 528,000 Magyars, and 183,000 Slavs. In the territory left to Rumania after the 1940 partition, the live birth rate was 24.3 per 1,000 inhabitants (preliminary) in 1941 (26.5 in 1940); death rate, 18.7 per 1,000, probably excluding war losses (19.2 in 1940).

Estimated populations of the chief cities on Jan. 1, 1939, were: Bucharest, 648,162 (nearly 1,000,000 in April, 1941); Chisinau (Kishenev), 112,500; Cernaui (Czernowitz), 109,698; Iasi (Jassy), 104,471; Galati (Galatz), 102,232; Cluj (ceded to Hungary), 100,272; Timisoara (Temesvar), 89,872; Oradea-Mare (ceded to Hungary), 80,872.

Education and Religion. Infant and primary schools of all types in 1938-39 numbered 19,394, with 2,623,000 pupils; secondary schools, 925, with 204,254 pupils in 1937-38. Adult primary schools had 669,187 enrolled (1938-39). Besides various special and vocational schools, there were three universities—at Bucharest, Iasi, and Cernaui—with 30,771 students in 1937-38. The university of Cluj was transferred to Hungary in 1940. According to a 1938 estimate, there were 13,200,000 Orthodox Church members, 1,426,813 Greek Catholics, 1,500,000 Jews, 1,200,000 Roman Catholics, 720,000 Reformists, 400,000 Lutherans, 260,000 Moslems, and 75,000 Unitarians.

Production. About three-fourths of the population are engaged in agriculture. The kingdom normally produces an export surplus of cereals, livestock, and animal products. Production was (in metric tons): Wheat, 2,455,000 in 1941; barley, 548,500 in 1940; rye, 91,700 in 1940; oats, 481,800 in 1940; corn, 4,625,000 in 1941; beet sugar, 77,000 in 1940-41; rapeseed, 14,800 in 1942; linseed, 15,100 in 1941; hempseed, 29,700 in 1941; sunflower seed, 222,100 in 1942; soybeans, 21,500 in 1942. The 1939 wool clip was 25,500 metric tons. Livestock in 1941 included 1,102,596 horses, 2,841,638 cattle, 1,655,241 swine, and 7,861,582 sheep.

After Russia, Rumania is Europe's leading petroleum producer. Output declined from the peak of 8,700,000 metric tons in 1936 to an estimated 5,460,000 tons in 1941 and 5,000,000 tons in 1942. Of the 1941 production, 1,821,600 metric tons were consumed in Rumania and the remainder exported, mainly to Germany. Other mineral and metallurgical output in 1940 (in metric tons) was: Lignite, 2,386,000; coal, 257,000; iron ore, 130,000; pig iron, 140,000; steel ingots and castings, 287,000 in 1939; manganese ore, 40,000; copper, 600; lead, 5,200; bauxite, 40,000; molybdenum ore, 160; silver, 15.6. There were 3,512 industrial establishments with 278,919 workmen in 1937. Flour milling, brewing, distilling, and oil refining were the principal manufacturing lines.

Foreign Trade. The following figures are in millions of lei (1 lei equaled \$0.0054 at official rate in 1941). Imports, 27,411 in 1940 (22,846 in 1939); exports, 36,780 (26,809). For the chief import and export items and distribution of trade in 1940, see 1942 YEAR BOOK.

Finance. For the fiscal year ended Mar. 31, 1943, budget estimates placed ordinary revenue and expenditure at 71.2 and 72.5 billions of lei, respectively. Extraordinary war expenditures, to be met chiefly by loans, were estimated at 134 billions (21 for the army and 113 for state-owned enterprises engaged in war production). In 1941-42 ordinary expenditures were about 44.8 billion lei and war expenditures 90 billions. The cost to Rumania of supporting German troops quartered in the country was reported at about 12 billion lei annually.

The announced public debt declined from 103,344,200,000 lei on Mar. 31, 1940, to 100,148,000,000 (internal, 36,991,000,000; external, 63,157,000,000) on Mar. 31, 1941. Currency notes in circulation (millions of lei): 48,800 on Dec. 31, 1939; 64,349 on Dec. 31, 1940; 96,650 on Dec. 31, 1941; 122,095 on May 31, 1943. Average exchange rate of the lei: \$0.0071 in 1939, \$0.00502 in 1940, \$0.00486 in the first half of 1941.

Transportation. The state railways in 1940 had 9,505 miles of line. Double tracking of the main lines to speed the movement of supplies to Germany and the construction of feeder lines opening up new mineral and raw material resources were reported under way in 1943. Traffic statistics for the state railways in 1942: Passengers, 47,384,000 (31,780,000 in 1941); freight, 23,703,000 metric tons (24,743,000 in 1941). The increase in passengers in 1942 was due to the relaxation of travel restrictions. Highways extended 67,330 miles. The state operated regular steamship services on the Danube and Black Sea, and also an air network connecting the principal cities. The German air network also took in Bucharest.

Government. The position of King Carol II became untenable in the autumn of 1940 as a result of the Russian annexation of Bessarabia and Northern Bukovina and the hostility of Germany and the pro-Nazi Iron Guard in Rumania. On Sept. 4, 1940, the King released Gen. Ion Antonescu from prison and appointed him Premier. The following day Carol suspended the authoritarian constitution of Feb. 27, 1938, dissolved Parliament, and gave Antonescu almost complete governing powers. On September 6 Antonescu forced the King to abdicate. Carol proclaimed Crown Prince Michael as his successor and fled abroad. Michael immediately confirmed Antonescu as Head of the State and Premier; the King retained only the right to grant decorations and amnesty, command the army, and control coinage. King Carol's Front of National Regeneration, which in 1938 replaced all political parties, was succeeded by the pro-Nazi Iron Guard on Sept. 15, 1940, when Rumania was proclaimed a National Legionary State. Following the crushing of an Iron Guard revolt in January, 1941, Premier Antonescu formed a new Cabinet Jan. 27, 1941, with army officers holding most of the portfolios. His regime became increasingly a direct military dictatorship dependent upon German support. A decree-law of Sept. 23, 1942, signed by every member of the Cabinet, declared Antonescu to be the only law-making authority and transferred to him from the Supreme Court the power to promulgate a new constitution.

Under Antonescu, Rumania adhered to the Three Power Pact (Axis military alliance) on Nov. 23, 1940, and to the Anti-Comintern Pact on Nov. 25, 1941 (see AXIS POWERS). It joined Germany in the attack upon the Soviet Union June 22, 1941, and declared a state of war with the United States Dec. 12, 1941. For war declarations against Rumania, see table under WORLD WAR. See below for developments during 1943.

HISTORY

Rumania in Axis Tolls. The international position and internal condition of Rumania was already desperate at the close of 1942 (see 1943 YEAR BOOK). During 1943 it became increasingly hopeless. Following the debacle of German and Rumanian armies before Stalingrad in December, 1942, the Axis forces in southern Russia were driven steadily westward. December of 1943 found the advancing Red Army within 150 miles of the Rumanian frontier.

The Rumanians had been thrown into the arms of Hitler by the Russian seizure of Bessarabia and Northern Bukovina in June, 1940. They joined the German attack upon Russia a year later primarily to regain these lost territories. Now it was plain that Marshal Antonescu had gambled unsuccessfully upon a German victory; that Bessarabia and Northern Bukovina were already lost; and that the remainder of the kingdom faced invasion and probable devastation by the Russians, whom the great majority of Rumanians hated and feared.

The kingdom seethed with growing weariness, defeatism, and political unrest. Yet it remained bound to Antonescu's discredited military dictatorship and the German alliance for lack of a practical alternative. To overthrow Antonescu and establish a pro-Allied regime would merely invite open German military occupation and a Hungarian attempt to seize Southern Transylvania. Moreover it would probably facilitate the dreaded Russian invasion. To continue in the war meant not only growing danger from Russia but also from Anglo-American air forces, which in the autumn acquired bases in southern Italy within easier striking range of Bucharest. The American air raid of August 1 upon the Ploesti oil refineries (see WORLD WAR), which destroyed nearly 50 per cent of their productive capacity, gave clear warning of the danger lurking over Rumanian cities and towns. With Turkey moving closer to war, Allied landings in the Balkans and naval operations in the Black Sea loomed as growing possibilities.

On the other hand the combined police power of the Antonescu dictatorship and the German Gestapo formations in Rumania stood ready to pounce upon any move toward capitulation or withdrawal from the conflict. Hitler held constantly over Antonescu two threats—to replace him with Horia Sima, leader of the abortive Iron Guard revolt of January, 1941, and to support Hungary in the bitter Rumanian-Hungarian quarrel over Transylvania. The Fuehrer employed these weapons to raise his demands upon Antonescu for more Rumanian fighting men and greater quantities of oil and food to help Germany carry on the struggle with Russia.

Hitler-Antonescu Negotiations. While Rumania was still stunned by the news of the disaster at Stalingrad, a political crisis of some sort developed early in January. According to reports reaching other countries, the police discovered and broke up an Iron Guard revolutionary plot, making numerous arrests. Other sources insisted that the plot was

manufactured by the Germans as an excuse for eliminating opposition elements.

The reports of the plot coincided with the reported arrest in Italy of Sima while on his way to Bucharest to initiate the uprising. Since Hitler had been holding Sima in reserve in Germany as a club over Antonescu, the story of his "escape" was received with scepticism. At any rate, it was announced that the Italian police had turned Sima over to the German authorities in Italy on January 6. A few days later Antonescu arrived at Hitler's headquarters for a conference, at which he was said to have asked an explanation of the German attitude toward Sima.

The principal issue discussed at this conference, however, was apparently the Rumanian demand for a German guarantee against Hungarian threats to invade southern Transylvania. Instead of concessions, Antonescu received new German demands for troops, oil, and food. At the same time Hitler tightened his grip on Rumania by placing responsibility for maintaining order on the German military commander there and appointing a German Elite Guard officer as head of the Rumanian secret police. To offset the hostility aroused in Rumania by these developments, a large German goodwill delegation arrived in Bucharest in mid-February. Meanwhile the Rumanian Government had ordered the evacuation from Bucharest and other large cities of all "nonessential civilians."

Antonescu and members of the Rumanian General Staff had another two-day conference with Hitler and the latter's chief military and diplomatic aides on April 11-12, when unspecified political and military issues were discussed. Indications were that Antonescu agreed to supply a limited number of additional troops for service in Russia but insisted on keeping the bulk of his forces at home as a precaution against both a Hungarian attack and an Axis collapse in Russia. Meanwhile Rumanian casualties, estimated at some 400,000 early in the year, continued to mount. Up to mid-June the Rumanian press had published the names of 25 generals and 41 colonels killed on the Russian front. Meanwhile desertions in the army had become so numerous that the Premier took severe measures to check them.

Peace Feelers. Early in June former Prime Minister George Tatarescu and an associate, Constantine Barsan, were arrested on charges of making contact with British and American agents in Turkey and Syria. They were transferred to a German prison following the arrival in Bucharest in mid-June of Reich Minister Heinrich Himmler's right-hand man in the Gestapo, Dr. Ernest Kaltenbrunner, who was placed in charge of all Rumanian police forces. Kaltenbrunner's appointment accompanied reports of growing anti-German sentiment and unrest in Rumania. Marshal Antonescu was said to have dismissed a number of officials for expressing hostility to German control of his regime. According to Allied sources, Antonescu himself had made overtures to the Anglo-American powers for a separate peace.

The Rome radio on July 6 announced that the Rumanian Premier was there conferring with Mussolini on problems of joint interest. However, Mussolini's overthrow on July 25 ended whatever hopes Antonescu may have placed in him to help solve Rumania's dilemma.

Withdrawal from Russia. Growing apprehension and panic swept Rumania as the Russian summer offensive continued on its victorious way. Large-scale evacuation of occupied areas in Russia and of Bessarabia and Northern Bukovina began in

September. In the same month a number of pre-war Premiers and party leaders met and reportedly urged the immediate withdrawal of all divisions from Russia for the defense of Rumania's frontiers. In a joint letter to Premier Antonescu they protested against "the anti-British and anti-American character you have given to the war." They declared that once Bessarabia and Northern Bukovina were "reunited with the mother country," Rumania had no motive for continuing the war.

The last three months of 1943 brought numerous indications that even the pro-German members of Antonescu's regime were eager to withdraw from the war in Russia in preparation for the impending domestic storm. Civilians were ordered to surrender all their arms by October 30 under penalty of death. In mid-November Antonescu again conferred with Hitler at the latter's headquarters. Immediately afterward the Germans took over the military administration of Odessa at Rumania's request and Antonescu began to withdraw the seven or eight divisions still serving in Russia. Several of these divisions were reportedly trapped in the Crimea.

Germans Tighten Hold. American bombing raids on Sofia, Bulgaria, during November spurred the evacuation of nonessential civilians from the principal Rumanian cities. The British Ministry of Economic Warfare stated on November 24 that Rumania had completely scrapped its food-rationing program and ended all restrictions on the public consumption of oil. There was a quiet exodus of Germans occupying unofficial positions. At the same time German military and police officials clamped a tight hold upon the kingdom. The Rumanian armed forces were purged of anti-German elements. German troops assumed responsibility for guarding public buildings and essential services and the Gestapo proceeded to round up numerous persons suspected of pro-Allied sympathies.

To add to the growing confusion, Rumanian army circles reflected an intensifying determination to settle accounts with Hungary and seek to regain that part of Transylvania ceded to Hungary in 1940 by the Vienna Award. Meanwhile a syndicate of corrupt Rumanian officials and others in close contact with King Michael and the Antonescu regime were said to be enriching themselves by monopolizing scarce commodities and levying heavy tribute on Rumanian business concerns. Their activities served to intensify the inflationary spiral, which by the end of 1943 had increased prices on most commodities from five to eight times the prewar level. They also were charged with extorting large sums from those Jews who had escaped deportation or slaughter.

Carol Tries Comeback. The prospect of the impending collapse of the Antonescu regime led former King Carol of Rumania to renew his efforts to obtain entry into the United States from his Mexico City refuge (see 1943 YEAR BOOK). On October 22 he announced that he had retained an American public relations firm to present his case to the American people and thus secure revocation of the State Department edict barring him from the country.

Carol accepted an invitation to broadcast a five-minute address explaining his position over the Columbia Broadcasting System on November 23. However the Office of Censorship in Washington rescinded its previous approval of the broadcast a few hours before it was to have been delivered. The former King attributed the cancellation to "maneuvers coming from interested circles." The Free Rumanian movement in the United States led

by Carlos Davila, former Rumanian ambassador to Washington, was hostile to Carol's efforts to associate himself with the movement. See BULGARIA, GERMANY, HUNGARY under *History*.

RUMI PLAN. See TAXATION.

RUNNING. See CROSS-COUNTRY RUNNING; TRACK AND FIELD ATHLETICS.

RURAL ELECTRIFICATION ADMINISTRATION (REA). See AGRICULTURE under *Electrification of Farms*; ELECTRIC LIGHT AND POWER.

RURAL WAR PRODUCTION TRAINING PROGRAM. See EDUCATION, U.S. OFFICE OF.

RUSSELL, Bertrand, Philosophy of. See PHILOSOPHY.

RUSSELL ISLANDS. See BRITISH SOLOMON ISLANDS; WORLD WAR under *The War in the Pacific*.

RUSSELL SAGE FOUNDATION. See PHILANTHROPY under *Foundation Activities*.

RUSSIAN ORTHODOX CHURCH. See UNION OF SOVIET SOCIALIST REPUBLICS under *History*.

RUSSIAN SOVIET FEDERATED SOCIALIST REPUBLIC. See UNION OF SOVIET SOCIALIST REPUBLICS under *Area and Population*.

RUST-PROOFING. See CHEMISTRY under *New Materials*.

RUTHENIUM. See PLATINUM.

RYE. The United States rye crop in 1943 was estimated at 30,781,000 bu. by the U.S. Department of Agriculture compared with the 1942 crop of 57,673,000 bu. and the 1932-41 average production of 38,589,000 bu. The acreage harvested for grain in 1943, 2,777,000 acres, was a drop of 28 per cent from the 3,860,000 acres in 1942 and 16 per cent below the average production of 3,293,000 acres for the ten years 1932-41. The acreage of rye, which for the past several years has been expanding for soil conservation purposes, this year was reduced toward the level of acreage usually grown on the thinner soils. The acreage yield per acre was 11.1 bu. in 1943 compared to 14.9 in 1942 and 11.4 for 1932-41. The season average price per bushel (preliminary) received by farmers was 97.0¢ and the value of production was estimated at \$29,870,000 in 1943 compared to 59.8¢ and \$32,491,000 in 1942. The following table lists the leading rye States in 1943.

State	Value	Acre Harvested	Production (bushels)
S.D.	\$4,646,000	522,000	5,220,000
Neb.	4,597,000	421,000	5,052,000
N.D.	3,332,000	349,000	4,014,000
Ind.	1,458,000	118,000	1,416,000
Minn.	1,415,000	123,000	1,538,000
Kan.	1,300,000	129,000	1,354,000
Colo.	1,164,000	126,000	1,323,000
Ohio.	1,163,000	76,000	1,140,000
Wis.	1,121,000	109,000	1,144,000

SAARLAND. See GERMANY under *Area and Population*.

SABOTAGE. See CIVILIAN DEFENSE, OFFICE OF; FEDERAL BUREAU OF INVESTIGATION; BELGIUM, BOHEMIA AND MORAVIA, BRAZIL, BULGARIA, DENMARK, FRANCE, GERMANY, GREECE, ITALY, NETHERLANDS, NORWAY, POLAND, PORTUGAL, SOUTH AFRICA, SWEDEN, under *History*.

SAFETY PROGRAMS. See LABOR CONDITIONS under *Women Workers*; MINES, BUREAU OF; MOTOR VEHICLES. Compare ACCIDENTS.

ST. CHRISTOPHER. Same as *St. Kitts*, see LEEWARD ISLANDS.

ST. HELENA. A British colony in the South Atlantic, consisting of the island of St. Helena (47 sq. mi.)

and its dependencies—Ascension Island (34 sq. mi.) and the smaller Tristan da Cunha group (Tristan da Cunha, Gough's, Inaccessible, and Nightingale Islands). Populations (1940 estimates): St. Helena, 4,710; Ascension, 169; Tristan da Cunha, about 163. The figures do not include British garrisons. Capital, Jamestown on St. Helena (1,381 inhabitants in 1931). New Zealand hemp is the chief export product. Some vegetables and fruit are raised for local consumption. Shipping (1940): 276,778 tons entered and cleared. St. Helena and the dependencies are administered by an executive council consisting of a governor and five official members. There is an advisory council of six appointed unofficial members. Governor, Maj. William Bain Gray (app. Mar. 18, 1941).

It was announced by the War Department in Washington in 1943 that United States armed forces had landed on Ascension Island Mar. 30, 1942, and built an airport which was used for anti-submarine patrols and for the delivery of United States planes to Allied forces in Africa.

ST. KITTS. See LEEWARD ISLANDS.

ST. LUCIA. An island colony in the Windward Islands group of the British West Indies. Area, 238 square miles. Population (1940 estimate), 71,222. Capital, Castries, 12,000 inhabitants. Vital statistics (1940): 2,204 births, 1,091 deaths, and 319 marriages. Education (Jan. 1, 1941), 45 schools and 10,896 students enrolled; also, there were 2 secondary schools and an intermediate school. The principal products are sugar (8,794 tons, 1942), copra, limes, cacao, and bananas. Trade (1941): imports £362,285; exports £153,636 (sugar £93,844). Shipping (1940): 1,261,998 tons entered and cleared.

Government. Finance (1940): revenue £103,403; expenditure £115,662. Public debt, Dec. 31, 1940, £104,681. St. Lucia is governed by an administrator (subordinate to the Governor of the Windward Islands), assisted by an executive council. There is a legislative council over which the Governor presides. Administrator, Arthur Alban Wright (app. June 10, 1938).

ST. PIERRE AND MIQUELON. A French colony comprising two small groups of islands near the south shore of Newfoundland. Area: St. Pierre group—10 square miles; Miquelon group—83 square miles. Total population, 4,175. Capital, St. Pierre. Fishing is the chief industry (804,595 kilograms of fish were caught during 1942). Trade (1940): imports 28,614,000 francs; exports 16,475,000 francs (official exchange rate of the franc for 1940 was \$0.0288). Textiles, wines, salt, and foodstuffs were the chief imports. Cod (fresh and dried) and fish products were the principal exports. Budget (1940): 13,738,690 francs. The islands are under the control of the French Committee of National Liberation in Algiers. An administrator, assisted by a consultative council, heads the local government. Administrator, Alain Savary.

ST. VINCENT. See WINDWARD ISLANDS.

SAKHALIN. An island northeast of Japan, in the Sea of Okhotsk. Area, 28,597 square miles. The northern part (north of 50° N.), 14,662 square miles, belongs to the Union of Soviet Socialist Republics. Karafuto (q.v.), the southern part, 13,935 square miles, belongs to Japan. See JAPAN

and UNION OF SOVIET SOCIALIST REPUBLICS under History.

SALES TAX. See TAXATION.

SALVAGE. See WAR PRODUCTION BOARD, especially under *Salvage*; CIVILIAN DEFENSE, OFFICE OF; also, ALUMINUM; IRON AND STEEL; PAPER AND PULP; RAILWAYS; TIN.

SALVATION ARMY, The. The global scope of The Salvation Army became clear to millions of Americans for the first time in 1943: U.S. troops landing overseas found Salvationists operating 2,000 canteens and clubs in Ireland, India, Iceland, Alaska, Africa, Australia, and other fronts. In 1943 the Salvation Army, an international organization with 27,000 officers, continued to serve humanity in 97 territories of the world, and, accompanying the invasion forces, resumed operations in the 98th country, Italy, where it had been banned during the Fascist regime.

In the United States emergency war services doubled in 1943. The number of Salvation Army mobile canteens, stationary canteens, clubs, dormitories, hospitality houses, and convalescent homes rose to 210. As a member agency of the United Service Organizations (q.v.) the Salvation Army also staffed and operated 201 additional service men's units where, with the aid of volunteer helpers, 29,686,299 individualized services were rendered.

The year was marked by increased efforts to meet rising child delinquency needs, overcrowding of the 178 lodging places, and increased strain on some of the 42 maternity homes and hospitals. The rehabilitation of inebriates, prison parole activities, salvage work, and all the other far-flung social services continued in 1943 without let-up, in spite of added war services.

More than 200,000 workers in 1,867 organized centers in the United States united in a national evangelical campaign. Visitation of the sick and bereaved, and the giving of cheer baskets increased. Earnest attention was given to returning veterans, to families of service men, and to families of women industrial workers.

The vast amount of clothing, made by the Women's Home Leagues, was increased to support the postwar plan activated in London by Gen. George L. Carpenter, International Leader of the Salvation Army. The program calls for building up reserves of clothing and other supplies throughout the countries of the world least ravaged by war, and the training of Salvationists from many lands to join the efforts of 5,000 Salvation Army officers, still in Europe, at the earliest moment militarily possible.

The administration of work in the United States is conducted from four territorial centers, and co-ordinated at the National Headquarters, 120 West 14th Street, New York City. On Dec. 31, 1943, Commissioner Edward J. Parker, after 58 years of selfless service, retired as national leader, at the age of 74, and Commissioner Donald McMillan was entrusted with his responsibilities.

SAMOA. A group of 14 islands in the mid-Pacific just below the equator and 4,150 miles southwest of San Francisco. The islands of the group east of 171°W. longitude, called American Samoa, belong to the United States; those west of that line are administered by New Zealand under a mandate of the League of Nations and are known as Western Samoa.

American Samoa. American Samoa includes the island of Tutuila on which the U.S. Naval Station is located; the Manua group, consisting of the islands of Tau, Olosega, Aunu'u, and Ofu; Rose Island; and Swain's Island. These islands, with the exception of Swain's Island, were acquired on Dec. 2, 1899, through a tripartite agreement with Great Britain and Germany. Swain's Island was not obtained until 1925. All but Rose Island, which is an uninhabited coral atoll, are of volcanic formation. The total area is 76 square miles and the estimated population on July 1, 1941, was 14,458, mainly Polynesian. The seat of government is at the village of Pago Pago, Tutuila, which has the finest harbor in the South Seas. Prior to World War II the population of the naval reservation was about 300; of Pago Pago, 1,000.

The islands are under the control of the Navy Department and are administered by a Naval Governor. Native participation in government consists of a Samoan Council called the Fono which meets annually. Its jurisdiction is limited to advisory functions. Samoans are not citizens of the United States, but owe allegiance to the American flag. Law and order is maintained by the Samoan Guard composed of 36 natives who are enlisted members of the U.S. Marine Corps. This Guard, called the Fita Fita, was reviewed by Lieut. Gen. Alexander A. Vandegrift, U.S.M.C., in the fall of 1943.

In 1941-42 the average public school enrollment was 2,500, attendance being compulsory for children between the ages of 6 and 15. The Pastors' or private schools admit pupils at 3 years of age and have a somewhat greater attendance. English is the medium of instruction in public schools and the Samoan language is used in the private schools. Illiteracy in 1930 was lower in American Samoa than in any other U.S. territory—6.3 per cent. Copra, dried coconut meat, is the most important crop. In 1940-41 a total of 862 tons were shipped at a value of \$23,557. Trade (year ended June 30, 1941): \$268,703 for imports and \$93,839 for exports. In an Executive Order of Feb. 14, 1941, President Roosevelt announced that after May 15, 1941, no unauthorized aircraft or vessels would be permitted within three miles of the Samoan Islands of Rose and Tutuila. The U.S. Congress during March, 1941, approved funds for defense aviation facilities at Samoa. Governor, Capt. Lawrence Wild, U.S. Navy, who assumed office, Aug. 8, 1940.

Western Samoa. West of American Samoa, less than 100 miles, lies Western Samoa, another group of islands of which the two largest are Savaii and Upolu. Racially and culturally they are similar to American Samoa. Area, 1,133 square miles. Population (July 30, 1941), 62,391, including 58,643 Samoan natives (Polynesians). Capital, Apia, on Upolu. A common indigenous culture and common folkways and mores form the foundation of society in both American and Western Samoa. The natives are Christians of different denominations. There were 12,225 pupils enrolled in the schools in 1941. Copra, cacao, rubber, and bananas are the chief products. Trade (1940): Imports, £165,453; exports, £221,733. For the year ended Mar. 31, 1941, government receipts were £107,980; expenditures, £110,000. During 1940, 100 vessels of 69,475 tons entered the port of Apia.

Following the outbreak of war between New Zealand and Japan on Dec. 8, 1941, the United States and New Zealand Governments took joint measures for the defense of all the Samoan islands. The Governor General of New Zealand inspected the defenses of Western Samoa in June, 1942. Later

it was revealed that a large U.S. air base had been constructed on the island of Upolu. The islands are administered by the New Zealand Minister of External Affairs, acting through an Administrator in Apia. On Feb. 24, 1943, A. C. Turnbull was appointed Administrator by the New Zealand Government.

CHARLES F. REID.

SAMOS. See GREECE under *History*; WORLD WAR under *The Balkans*.

SANITATION. This classification covers sewerage, treatment and disposal of sewage and industrial wastes, collection and disposal of garbage and rubbish, stream pollution, and measures for protection of public health. The war period adds sanitary facilities for camps and war industries and provisions for postwar municipal developments. With numbers of men returning sick, wounded, and weak, care must be taken to prevent spread of disease.

Sewage treatment plants in the United States, early in 1943, totaled 7,000, including 500 at army camps and defense areas. Of 6,191 plants serving 61,000,000 people, 4,718 were relatively modern. Expenditures on municipal plants were \$43,000,000 in 1942 and may reach \$73,000,000 in 1943. A new problem is sanitary control of trailer parks for travelers and for emergency housing of workers in war industries. The great sewage treatment plants at Chicago are still uncompleted, owing to priority restrictions on needed materials. After long experiments, the flash-drying process has been adopted for treating the sludge, which is first de-watered in vacuum filters. Much of the dried sludge is sold as fertilizer.

Safe and effective operation of such plants requires technical knowledge and skill, but with the draft of men for the army and for management of military plants, the supply of competent men for civilian plants has been greatly depleted, so that it has been necessary to give brief intensive instruction to assistants—men and women—to provide reasonably safe operation. Simple methods and equipment are employed for army plants, in view of the shortage of skilled men. Their type depends largely upon local conditions, and their operation is on the same high plane as at municipal plants. As a rule, the only industrial waste to be considered is that of the laundries. Grease removal, however, is a major trouble. Army posts have from 5,000 to 40,000 men.

Research and experiments have been continued, one development being the vacuum flotation process for removing grease and scum from sewage and wastes. There is also the Hays system of submerged-contact aeration, now used in several army camps and in cities of 500 to 40,000, while the Mallory oxidized sludge process is on trial at Ann Arbor, Mich. A sewage treatment process adaptable for small towns has been developed at an ordnance plant working 4,500 employees in three shifts. The Wisconsin Circuit Court, in September, held that the city of Kenosha need not handle industrial wastes that prevent proper operation of the sewage treatment plant; the companies must provide preliminary treatment of their wastes.

As grease is so needed in many war industries, much attention is given to methods of its recovery from sewage, scum, and sludge. Study of the poliomyelitis epidemic in 1943 showed that the virus survived even in sewage sludge after treatment, and that special means are required to re-

move it from water supply. Use of sewage sludge as fertilizer on lawns and flower and vegetable crops is being revived, but further tests are necessary to determine its value and safety, although it is said that no case of sickness has been traced to the use of digested or activated sludge.

Disposal of garbage and rubbish is mainly a local problem, no general method of being efficient or economical under all conditions. A survey at Philadelphia showed a decrease in volume of garbage, due to more careful use of food in war time. Collection by municipal forces rather than by contract is increasing, and charges are sometimes made for this service. Grinding garbage and delivering it to sewers for combined treatment at the sewage works is not increasing. It is rarely economical, but may be more satisfactory where solids are digested and the resultant gas is utilized. A few towns have allowed the use of domestic or kitchen grinders, with discharge to the sewers.

Refuse that goes to the incinerators at army camps contain about 75 per cent of dry material, as against 35 per cent in municipal rubbish, which has caused some trouble at army plants designed on the 35 per cent basis. In the land-fill or sanitary-fill method of garbage disposal, now used increasingly since it requires no special plant, the stuff is dumped in layers, horizontally or on the slope of a dump, and each day's deposit is promptly covered with earth. There is little odor, and the temperature is too high for rats or fly larvae. At New York, this method has been used on a large scale for filling and reclaiming marsh lands, but suit has been brought by L. M. McCarthy for infringement on his patent on the process. Although it has been used successfully for some years at San Francisco, much of the actual garbage there is fed to hogs, so that the dumped material is largely dry refuse. Some States, and also Canada, require that garbage for hog food must be cooked, and this has checked the use of this method.

Stream pollution becomes more important as populations increase and communities have to go farther afield for additional water supply. Philadelphia is to reopen an old suit to stop pollution of the Schuylkill River by culm or waste from coal mines. Cleaning this river and the Delaware from sewage and other pollution is estimated to cost \$140,000,000. In its attempt to check pollution of the south end of Lake Michigan, whence its water supply is drawn, Chicago has brought suit against the State of Indiana and four cities responsible for such pollution.

Cooperative action of the State of Michigan and 13 communities north of Detroit will aid in preventing the pollution of streams flowing into Lake St. Clair and the Rouge River at Dearborn. A tunnel will intercept the sewage flow and deliver it to the Detroit sewers for treatment at the disposal works, only storm water passing into the streams. Half the cost will be paid by the Federal government, and the remainder by revenue bonds to be retired by sewer service charges.

At Los Angeles, an injunction was sought to stop the city from polluting the bay and bathing beaches with sewage discharged from the Hyperion outlet. The State Board of Health excluded the public from the beaches on account of the danger to public health. Protection of the harbor and bathing beaches at New York and its environs is in the hands of a joint commission representing the states of New York, New Jersey, and Connecticut. In the case of Ashland, Ohio,

the courts held that a municipality has no right to discharge sewage into a stream, while Michigan courts upheld the State sanitary commission in requiring Niles to provide sewage treatment, even though other cities discharge into the same stream. A sanitary survey of the Ohio River was completed in 1943 by the U.S. Public Health Service.

Good health conditions in war industry areas and in army camps and field operations have resulted from cooperation with the army sanitary corps and the sanitation section of the Public Health Service as well as with State boards of health. Even in jungle warfare the cases of malaria and dysentery have been kept at a minimum. At home, the emergency duties of the above section have included the operation of mobile laboratories to test water and milk supplies. To protect areas having no community facilities, and where such facilities would be overtaxed by rapid expansion of population, plans were made for protection of private water supply and the construction of septic tanks and sanitary privies.

Postwar projects for sanitary works are becoming numerous, with much attention to the smaller communities. Of such projects ready for putting into construction, 55 per cent were for sewer systems, 28 per cent for sewage treatment plants, 15 per cent for both sewers and plants, and 2 per cent for garbage and waste disposal. Promotion of many such projects will be aided by pressure for reduction of stream pollution. A joint committee of technical associations has been organized to assist State departments and local authorities. Its premise is that every city should have a safe water supply and should dispose of its wastes without causing offense to its neighbors. It considers that municipalities should now prepare plans, purchase sites, and arrange for financing their own projects, Federal aid being unnecessary and undesirable.

Activity is increasing in connection with housing developments, as property to be accepted by the Federal Housing Administration (q.v.) for mortgage insurance must have both water and sewerage facilities. If public utilities are available, the properties must be connected to them. Otherwise, new facilities must be designed in accordance with recommendations of the health department of the State concerned. These regulations apply to both individual and community properties. The FHA has no detailed requirements for garbage disposal at individual properties, but for rental housing projects it requires sanitary removal and disposal, with freedom from nuisance.

In Mexico, several communities along the Inter-American Highway are to be provided with water and sanitary services by the United States, in accordance with plans adopted by a South American convention at Rio de Janeiro in 1942. Many such projects are under way throughout South America, some assisted through the Institute of Inter-American Affairs. But in all countries many other public works precede sewerage, and relatively few cities of South America have yet reached the stage of providing such sanitary facilities. In Canada, 476 towns have at least a mile of sewers. At Toronto, a new sewage treatment plant is needed, as sewage deposited in the lake year after year is now beginning to rise and foul the beaches, making bathing dangerous to health. Design of sewage treatment plants on a regional scale has been advocated in England, in view of the cost for small communities. According to local con-

ditions, some of these regions might have small sewer systems serving plants at a number of communities, while others might have larger sewer systems serving a few large central plants.

See COORDINATOR OF INTER-AMERICAN AFFAIRS; PAN AMERICANISM; PUBLIC HEALTH SERVICE; BOLIVIA, BRAZIL, CUBA, ECUADOR, EL SALVADOR, GUATEMALA, HONDURAS, NICARAGUA, under *History*.

E. E. RUSSELL TRATMAN.

SAN MARINO. An independent republic in Italy, near the town of Rimini. Area, 38 square miles; population (1939), 14,545. Capital, San Marino. Chief exports: cattle, wine, building stone. Financial estimates (1939-40) were balanced at 6,009,919 lire (lira averaged \$0.0520 in 1939). The legislative power is in the hands of the grand council of 60 members elected by popular vote. Two are appointed from this council every six months to act as regents.

SANTA CRUZ DE TENERIFE. See CANARY ISLANDS.

SANTO DOMINGO. See DOMINICAN REPUBLIC.

SÃO THOMÉ AND PRINCIPE. Two Portuguese islands in the Gulf of Guinea, West Africa. Area, 384 square miles. Population (1940), 60,490. Capital, São Thomé. Coffee, cacao, coconuts, palm oil, and cinchona are the main commercial products. Trade (1940): imports 21,327,000 escudos; exports 43,030,000 escudos (special commerce) (escudo was worth \$0.0371 during 1940). Budget (1942): 11,580,181 escudos. Shipping (1940): 89 vessels aggregating 339,638 net tons cleared the ports. Governor, Capt. Ricardo Vaz Monteiro.

SARAWAK. See BRITISH MALAYA.

SASKATCHEWAN. A prairie province in western Canada. Area, 251,700 square miles, including 13,725 square miles of fresh water. Population (1941 census), 895,992 (477,563 male; 418,429 female), comprising, by racial origin, British Isles races 397,905, German 130,258, Ukrainian 79,777, Scandinavian 68,806, French 50,530, Netherlands 35,894, etc. Religious membership (1941 census): Roman Catholic 243,734, United Church 230,495, Anglican 117,674, Lutheran 104,717, Presbyterian 54,856, etc. Chief cities: Regina (capital) 58,245 inhabitants in 1941, Saskatoon 43,027, Moose Jaw 20,753, Prince Albert 12,508, Weyburn 6,179, Swift Current, 5,594, Yorktown 5,577. In 1942 there were 18,159 living births, 6,173 deaths, and 7,207 marriages. Education (1940-41): 225,463 students in schools and colleges.

Production. The gross value of agricultural output for 1942 was \$480,452,000 (field crops accounted for \$373,714,000, farm animals \$53,255,000, milk \$26,487,000, poultry and eggs \$20,973,000, fruits and vegetables \$4,079,000). Chief field crops (1942): wheat 335,000,000 bu., oats 255,000,000 bu., barley 92,000,000 bu., rye 15,000,000 bu., flaxseed 10,500,000 bu., potatoes 204,700 tons, turnips, etc. 23,000 tons, hay and clover 537,000 tons, alfalfa 263,000 tons, fodder corn 47,000 tons. Livestock (June 1, 1943): 1,602,000 cattle (including 502,400 milk cows), 1,754,600 swine, 824,400 horses, 463,000 sheep, 14,873,000 hens and chickens, 889,000 turkeys. Fur output (1941-42): 3,813,447 pelts valued at \$2,245,275.

Mineral output for 1942 was valued at \$19,613,354 (gold, 173,361 fine oz., accounted for \$6,674,398, other metals \$9,345,932, non-metals excluding fuels \$1,118,866, fuels \$1,729,521).

Manufacturing (1941): 945 plants, 8,546 employees, \$9,979,974 for salaries and wages, \$65,836,308 for cost of materials, \$28,172,441 was the net value of production.

Government. Finance (year ended Apr. 30, 1942): revenue \$28,440,367; expenditure \$28,180,818; total direct and indirect liabilities (less sinking funds) \$228,471,194. The executive authority is vested in a lieutenant governor who is advised by a ministry of the legislature. In the Legislative Assembly there are 52 members elected for a five-year term by adult male and female voters. Six members (appointed for life) in the Senate and 21 elected members in the House of Commons represent Saskatchewan in the Dominion Parliament at Ottawa. Lieutenant Governor, A. P. McNab (app. Oct. 1, 1936); Premier, W. J. Patterson (Liberal; app. Nov. 1, 1935).

SAUDI ARABIA. See under ARABIA; EGYPT under History.

SAVINGS. See FINANCIAL REVIEW; LIVING COSTS.

SAWDUST DYE. See CHEMISTRY under Dyes.

SAXONY. See GERMANY under Area and Population.

SCHARNHORST SINKING. See WORLD WAR under The War at Sea.

SCHAUMBURG-LIPPE. See GERMANY under Area and Population.

SCHEELITE. See TUNGSTEN.

SCHOOLS. The U.S. Office of Education estimated that 23,276,000 pupils were enrolled in the public-school systems of the United States for the school year 1943-44, a decrease of about 664,000 from 1942-43 and approximating what it was 22 years ago in 1921-22 (23,239,227). Enrollments in colleges and other institutions of higher learning numbered an estimated 1,110,500 in the fall of 1943. Estimates in public-school systems by type of school and sex are given in the following table:

School	Number enrolled		Decrease	
	1942-43	1943-44	Number	%
Total.....	23,940,000	23,276,000	664,000	2.8
Boys.....	12,089,000	11,670,000	419,000	3.5
Girls.....	11,851,000	11,606,000	245,000	2.1
Elementary.....	17,798,000	17,515,000	283,000	1.6
Boys.....	9,142,000	8,969,000	173,000	1.9
Girls.....	8,656,000	8,546,000	110,000	1.3
High.....	6,142,000	5,761,000	381,000	6.2
Boys.....	2,947,000	2,701,000	246,000	8.3
Girls.....	3,195,000	3,060,000	135,000	4.2

Figures on public education, as supplied by the States for the school year 1941-42, appear in the table at the top of the next column.

From the close of school in June, 1943, to the first of October in the same year close to 117,500 teachers changed positions. Of this total, 79,900 left the teaching profession and the other 37,600 went to other school systems. Over 10,000 male teachers and 4,800 women teachers entered the armed forces during this period.

Higher Education. For detailed statistics and discussion, see UNIVERSITIES AND COLLEGES.

Trends. To show the continual increase in the amount of education obtained by each successive class matriculation, the U.S. Office of Education compiled a study on the "survival" of pupils through the school system to high-school and college graduation.

Of every 1,000 pupils in the class that entered the fifth grade in 1906, only 23 were graduated from college in 1918; but of every 1,000 pupils entering that class in 1929, 71 were graduated from college. Thus, in 23 years there has been a 200 per cent increase in the holding power of the

PUBLIC INSTRUCTION IN THE UNITED STATES*

State	Total Enrollment	Instructional Staff Number	Av. Salary	Expenditure
Ala.....	674,001	20,006	\$ 755	\$ 24,982,185
Ariz.....	116,430	3,573	1,419	8,873,471
Ark.....	453,989	13,066	678	16,065,449
Calif.....	2,244,978	43,200	2,372	180,408,535
Colo.....	202,742	9,097	1,416	31,020,503
Conn.....	290,187	11,740	1,724	29,776,009
Del.....	43,098	1,615	1,639	4,254,263
D.C. ^b	96,170	3,057	2,350	12,911,000
Fla.....	402,009	13,721	1,127	21,807,616
Ga.....	769,835	21,912	839	30,099,206
Ida.....	120,029	4,532	1,080	10,934,179
Ill.....	1,197,083	47,911	1,826	145,522,951
Ind.....	669,148	22,560	1,372	54,832,997
Ia.....	490,934	24,808	1,024	47,336,249
Kan. ^c	357,544	18,780	.....	29,802,037
Ky.....	581,305	18,372	750	31,897,972
La.....	464,969	14,945	1,056	35,111,781
Me.....	163,140	6,383	880	11,557,486
Md.....	298,437	8,944	1,707	28,676,039
Mass.....	656,974	25,026	2,007	70,760,947
Mich.....	949,740	32,490	1,654	107,490,223
Minn.....	516,594	21,664	1,644	53,674,181
Miss.....	597,135	16,168	580	15,033,345
Mo.....	698,297	24,823	1,005 ^d	57,249,172
Mont.....	102,906	5,161	1,161	14,371,107
Neb.....	257,664	13,397	1,246 ^e	20,991,682
Nev.....	23,993	945	1,715	2,457,769
N.H.....	72,515	3,051	1,425	7,856,372
N.J.....	701,159	26,041	2,081	89,168,556
N.M.....	131,347	3,743	1,313	9,855,690
N.Y.....	2,121,952	77,884	1,947 ^f	356,183,374
N.C.....	877,913	26,479	957 ^g	36,684,669
N.D.....	133,203	7,578	1,105	10,222,373
Ohio.....	1,175,275	40,550	1,698	113,027,776
Okla.....	528,293	19,391	1,139	32,015,747
Ore.....	214,640	7,987	1,425	22,632,211
Penn.....	1,738,701	62,566	1,568	212,269,340
R.I.....	105,946	4,151	1,798	11,896,616
S.C. ^h	475,210	15,632	807	13,566,698
S.D.....	128,959	7,784	871	12,276,684
Tenn.....	635,826	20,272	822 ⁱ	30,059,387
Tex.....	1,311,809	44,693	1,052	98,000,000
Utah.....	138,713	4,604	1,430	12,292,390
Vt.....	60,511	2,749	1,001	5,300,000
Va.....	586,139	17,977	798	32,194,914
Wash.....	337,439	11,655	1,756	33,069,342
W.Va.....	443,337	16,119	1,272	29,990,041
Wis.....	519,864	21,236	1,470	52,100,220
Wyo.....	54,631	2,825	1,270	6,951,372

* Information supplied by the States except as noted. ^b Data pertains to the year 1940, as supplied by the *Statistical Abstract of the United States, 1948*. ^c Data applies to 1940-41. ^d This figure applicable only to elementary instructors; average figure for secondary instructors somewhat higher. ^e This figure includes only payments to men (city and village); average salary for women (city and village): \$980. ^f Exclusive of New York City; average salary including New York City, \$2,622. ^g Exclusive of principals, whose average salary was \$1,653. ^h Data applies to 1942-43. ⁱ Exclusive of principals, whose average salary was \$1,103.

schools from the fifth grade through college.

Taking the figures for results of the fifth grade through high school, of every 1,000 pupils who entered the fifth grade in 1906, only 139 remained to graduate from high school in 1914, but of every 1,000 pupils entering that grade in 1934, 440 remained to graduate from high school in 1942. Thus, during this 28-year period, the survival rate through high school increased 215 per cent. However, the 440 pupils graduated in 1942 was a lower total by 36 than the 476 graduates in 1941, showing the beginning of the effect of the war on high-school graduation.

The proportion of students entering high school and remaining to graduate has followed the general trend. Of every 1,000 pupils entering high school in 1927 only 465 were graduated in 1931; but of every 1,000 entering in 1938, 549 graduated in 1942. Lastly, the proportion of pupils entering high school and continuing through graduation from college has increased steadily from 86 in 1936 per 1,000 entering high school to 94 in 1940 and 1941.

An educational breakdown of statistics from the 1940 census shows that of 85,000,000 persons who were 20 years of age or more in 1940, about

3,000,000, or 3.4 per cent, had not attended any educational institution for more than one year. Conversely, about 9,000,000, or 10.5 per cent, had completed one or more years of college. It is interesting to note that young men 20 to 24 years of age at the time of the census had spent an average of almost 11 years in school, while men who were between 40 and 44 in 1940 had averaged only eight and a half years, little more than grade school education. The white population has a consistently higher educational attainment at each age than the non-white population.

See **EDUCATION**; **EDUCATION, U.S. OFFICE OF**; **LIBRARY PROGRESS**. For enrollment in private schools, see **1942 YEAR BOOK**. For laws affecting induction of high school students, see **SELECTIVE SERVICE SYSTEM**.

SCIENTIFIC RESEARCH AND DEVELOPMENT, Office of (OSRD). A United States agency, established by executive order, June 28, 1941, to assure adequate provision for research on scientific and medical problems relating to the national defense. Dr. Vannevar Bush, President of the Carnegie Institution of Washington, is Director. The headquarters are located at 1530 P Street, N.W., Washington, D.C. For details of organization see **1943 YEAR BOOK**.

Reports of progress and of results of OSRD activities, by reason of the nature of their subject matter, are not generally available but are held to a closely restricted distribution, primarily in the armed services.

SCOTLAND. See **GREAT BRITAIN** under *Area and Population*; **BRIDGES**.

SCRAP COLLECTIONS. See **WAR PRODUCTION BOARD** under *Salvage*; **CIVILIAN DEFENSE, OFFICE OF**; also, **ALUMINUM**; **IRON AND STEEL**; **PAPER AND PULP**; **RAILWAYS**; **TIN**.

SCREENING TESTS, Military. See **PSYCHIATRY**.

SCREWORM. See **INSECT PESTS**.

SCULPTURE. See **ART**.

SEABEES (Construction Battalion). See **NAVAL PROGRESS** under *United States*.

SEATRAINS. See **RAILWAYS**.

SEA WATER, Treatment of. See **CHEMISTRY** under *Water*; **WATER SUPPLY AND PURIFICATION**.

SEC. See **SECURITIES AND EXCHANGE COMMISSION**.

SECOND FRONT AGITATION. See **GREAT BRITAIN** under *History*.

SECRET SERVICE, U.S. A division of the U.S. Department of the Treasury, charged with the protection of the President, the suppression of counterfeiting, safeguarding of the money and securities handled by the Government, and the investigation of crimes relating to the Department of the Treasury. (See **YEAR BOOK** for 1941 for details.) Chief: Frank J. Wilson.

SECRET WEAPONS. See **AERONAUTICS** under *Axis Types*; **BOMBS**. Compare **MILITARY PROGRESS** under *Weapons*.

SECURITIES AND EXCHANGE COMMISSION (SEC). An independent agency of the U.S. Government which has the following functions: Supervision of registration of security issues and suppression of fraudulent practices in the sale of securities under the Securities Act of 1933; supervision and regulation of transactions and trading in outstanding securities, both on the stock exchanges and in the over-the-

counter markets, as provided in the Securities Exchange Act of 1934; regulation of public utility holding companies under the Public Utility Holding Company Act of 1935; supervision of indentures used in the public offering of new security issues as provided under the Trust Indenture Act of 1939; registration and regulation of investment companies and investment advisers under the Investment Company Act and the Investment Advisers Act of 1940; and the preparation of advisory reports on plans, and participation as a party, in corporate reorganizations under Chapter X of the National Bankruptcy Act. Chairman: Ganson Purcell. For 1943 activities, see **FINANCIAL REVIEW**; **LAW**; also, **ELECTRIC LIGHT AND POWER**.

SECURITY SECTION. See **FEDERAL COMMUNICATIONS COMMISSION**.

SEDITION. See **FEDERAL BUREAU OF INVESTIGATION**; topics listed under **SABOTAGE**.

SELANGOR. See **BRITISH MALAYA**.

SELECTIVE SERVICE SYSTEM. The Selective Service System was created by a law passed on Sept. 16, 1940. Its history may readily be divided into four periods. The peacetime Selective Service extended from Sept. 16, 1940, to Dec. 7, 1941, the attack on Pearl Harbor. During the first year of wartime the Selective Service System was administered as an independent organization, reporting after Apr. 5, 1942, to the War Manpower Commission in order to correlate the demands for civilian and military personnel. On Dec. 7, 1942, by Executive Order of the President, the Selective Service System was made a part of the War Manpower Commission. It operated during the year 1943 as a part of the War Manpower Commission but, by a law approved on Dec. 5, 1943, the Selective Service System was returned to its original status as an independent war agency.

Legislation. The basic law of Selective Service, approved Sept. 16, 1940, continues to be the essential characteristic of the System. It provided for the system of local boards of which there are 6,443, and of appeal boards, of which there are (Dec. 28, 1943) 255, and 111 subordinate groups. All classifications of registrants are considered originally by the local boards; appeals may then be taken to an appeal board with a larger area of jurisdiction than a local board and a final appeal may be made to the President. During peacetime (1941) this law was amended, temporarily relieving men—(1) if they had a certain amount of previous military experience, and (2) if they were 28 years of age and over. The law was also amended extending the period of training in active military service to 18 months, instead of one year.

During the first year of wartime, particularly immediately after Pearl Harbor, a number of amendments were made in the law. These included removing the restrictions on the territorial use of the Army of the United States and extending the period of service or training to a period comprehending the duration of the war and six months immediately following the termination. It extended a requirement for registration to all male persons in the United States 18 to 65 years of age, and extended liability to all persons between the ages of 20 and 45. A later act further extended the liability down to persons 18 years of age, with a provision for temporary deferment of the induction of high school students. A Servicemen's Dependents Allowance Act was passed June 23, 1942, which, taken in conjunction with the Pay Adjustment Act passed a week earlier, had important

consequences on the classifications for dependency.

Further increases in Army pay and liberalization of family allowances were authorized in 1943. (Public Law 33, April 10; Public Law 174, October 26.) Other legislation includes selection of institutions at which Army and Navy Training Courses are to be held (see *UNIVERSITIES*), and the clarification of deferment of high school students. Deferment may be obtained, on request, if the student is in the last half of his academic year, "until the end of such academic year, without regard to the date when such academic year ends, or until he ceases to pursue such course of instruction, whichever is the earlier."

On February 15, the Women's Marine Corps, authorized the previous year, began to recruit. These women, with the WACS, WAVES, and SPARS, have a direct relation to Selective Service, since their numbers are counted in the total of the armed forces, and thus affect Selective Service quota calls.

During the year 1943 a most important piece of legislation which affected Selective Service, though only indirectly, was the law for the rehabilitation of disabled veterans. This is to be administered by the Veterans' Administration (q.v.), and must be taken into account by Selective Service in administering the reemployment sections of the Selective Service law. (P.L. 16, 78th Cong., approved Mar. 24, 1943.) In the course of the year, a number of laws were passed concerning insurance, compensation, and rehabilitation, and many bills were introduced dealing with mustering-out pay and pensions.

The first important law directly relating to Selective Service, passed in 1943, was the law relating to the occupational deferments of Federal employees. This question has been considered at various steps from the memorandum prepared by certain high Government officers, for the President, in February, 1942. At the beginning of 1943 the Bellamy Committee made its report on deferments in the Federal Government. As a result of this report, Executive Order No. 9309 was issued by the President (Mar. 5, 1943), controlling the whole problem of making requests for deferment of Government employees in the Executive branch of the Government. The Lodge-Maybank Law (approved April 8) practically gave the Executive Order statutory status regarding the Executive branch of the Government, and set up committees in the legislative and judicial branches to consider deferments in those branches. Its more important provision was the directive to local boards that in a classification, reclassification, or deferment of Government employees on occupational grounds, no consideration should be given to the fact that any such persons were in the employ of the Executive, Legislative, or Judicial branches of the Government, unless a request, in conformity with the law, was presented by one of the Committees. The Law (Public Law 23, approved Apr. 8, 1943) so required, beginning 60 days after the Act, for a monthly report to Congress by the Director of Selective Service, giving the names and positions of all persons who had been deferred on occupational grounds (Class II-A or Class II-B) in accordance with the law.

During the entire year there was much debate in Congress on the so-called Fathers' Draft Bill, which, after many changes, became a law (P.L. 197) and was approved Dec. 5, 1943. Originally, Representative Kilday had introduced (Feb. 5, 1943) a bill providing for "categories," according to degrees of dependency. This bill had reached

the stage of hearings before the House Military Affairs Committee when Senator Wheeler introduced a different bill in the Senate (February 25), aimed to accomplish the same end. Hearings on this were held before the Military Affairs Committee of both Houses, at which high Army officials, including General Marshall and Admiral King, gave important testimony. The bill, as finally passed, orders that men "married prior to Dec. 8, 1941, who have maintained a *bona fide* family relationship with their families since that date, and who have a child or children under 18 years of age" shall not be inducted until all other groups, considered on a "*Nationwide basis* within the Nation and a *Statewide basis* within the State," have first been taken. This is to be done "on the basis of the best inventory available at the time of allocating calls, without affecting the usual regular and orderly flow of the Nation's manpower into the armed forces."

On Jan. 30, 1943, Local Board Memorandum No. 181 announced that "national interest will no longer permit the deferment of registrants in Class III-A where such registrants are engaged in activities or occupations which are non-deferrable." Attached was a list of such non-deferrable occupations as designated by the WMC. This so-called "Work-or-Fight" order became effective April 1, when men working in these non-deferrable industries were required to change their occupation to an essential industry within 30 days, or to be inducted. This was prohibited by P.L. No. 197, and the non-deferrable list was abolished Dec. 10, 1943.

Attached to the bill are several important amendments. Occupational deferment is now to be submitted for review and decision to the appeal board having jurisdiction over the area of the registrant's employment instead of in that of his local board. This concentration of authority in certain industrial areas has necessitated large additions of special panels of five members each to the regular appeal boards. The President is directed to appoint a commission to study the present requirements for admission to the armed forces, with the object of obtaining from the large group (3,353,052) now classified as IV-F, more men available for induction, especially for limited service. The President, on Dec. 30, 1943, appointed the Commission, naming Rear Adm. Ross T. McIntire, Surgeon General of Navy, Maj. Gen. Norman Kirk, Army Surgeon General, Dr. Alan C. Woods, Ophthalmologist-in-chief, Johns Hopkins Hospital, Baltimore, Dr. Frank H. Lahey, surgeon-in-chief, Lahey Clinic, Boston, and Dr. Edward A. Strecker, Professor of Psychiatry, University of Pennsylvania, and Medical Director of Pennsylvania Hospital, Philadelphia.

A registrant, whose induction is expected to occur shortly, must, on request, be given a pre-induction physical examination, in accordance with authorized schedules, and the result of this must be accepted by his local board. The registrant will remain in the classification assigned as the result of this examination (except for ordinary periodic reexamination), and shall report for induction in regular order. Also important is the amendment which says: "The President is authorized to delegate to the Director of Selective Service *only*, any authority vested in him under this act," thus removing the Selective Service System from the jurisdiction of the War Manpower Commission. Following this, the President on Dec. 23, 1943, issued two Executive Orders (Nos. 9409 and 9410). In the first the Director of Selective Service

was made a member of the board of the War Manpower Commission. In the second the Selective Service was again made a separate agency; the President delegated authority to the Director of Selective Service, but ordered the Director to consult with the Chairman of the War Manpower Commission on all matters dealing with the administration of Selective Service to assure coordination with the "administration of the policies and programs of the Chairman of the War Manpower Commission."

Registration. There have been seven Registrations held in accordance with proclamations by the President. The first, ordered on the same day the Selective Service Act became law, was held on Oct. 16, 1940, for all males between the ages of 21 and 36 in the continental United States, and shortly after (Oct. 26, Nov. 20, Jan. 22, 1941) for those of that age group in Hawaii, Puerto Rico, and Alaska respectively. About 16½ million persons were registered. The Second Registration, held July 1, 1941, for all youths who had become 21 since the First Registration, added about 800,000 to those then liable to military service. Following the changed legislation, after Pearl Harbor, a Third Registration was held on Feb. 16, 1942, enrolling an additional 8½ million persons, not previously registered, who were between 35 and 45 years of age, and also those who had now become 20 years old. On Apr. 27, 1942, the Fourth Registration registered about 14 million men between 45 and 65 (a group not subject to military service).

Although not yet liable for military service, almost three million youths between 18 and 20 were included in the Fifth Registration, held June 30, 1942. Following the legislation making 18 the age of liability, a Sixth Registration was ordered, calling for the registration between Dec. 11 and 31, 1942, of all who would reach their 18th birthday by the latter date, about half a million persons. It was further provided that, instead of any future mass registration, there should be a continuing registration, each boy to register on his 18th birthday. It is estimated that about 100,000 males reach this age each month, but that many of this group have already enlisted in the service of their choice before they are 18.

On Oct. 26, 1943, the President issued a proclamation calling for the Seventh Registration, to take place between November 16 and December 31, for all male citizens between 18 and 45 who reside outside the continental United States, and who have not already registered at some time when they have been in the United States. Registration for those who become 18 hereafter is to continue as prescribed above.

The grand total of those registered (between 18 and 45) shows a national military manpower of about 30 million persons, and about 14 million others (between 45 and 65). A decision by the armed forces, following identical letters from the President to the Secretary of War and Secretary of Navy (Dec. 5, 1942), for the present, decrees that men over 37 years of age are not acceptable, thus reducing the military pool by about 7½ millions. This decision may be changed at any time without formal legislation.

Classification. After men are registered, the next step in the Selective Service process is classification, which is done basically on a comprehensive questionnaire filled out by each registrant. Additional information may be submitted, and claims for deferred classifications may be made by the registrant himself or by other interested parties.

Registrants are placed in one of the four main divisions, then are assigned specifically to the so-called classes, Class I, available for training and service; Class II, temporarily deferred because of occupation; Class III, deferred because of dependency; Class IV, deferred for miscellaneous reasons.

At the beginning of 1943 the following classes were in effect:

Class I-A: Available for Military Service
Class I-A-O: Available for Noncombatant Military Service (Conscientious Objector)
Class I-C: Member of Land or Naval Forces of the U.S.
Class II-A: Necessary in his Civilian Capacity
Class II-B: Man Necessary in War Production
Class II-C: Engaged Regularly in and Necessary to Agriculture
Class III-A: Deferred by Reason of Dependency
Class III-B: Deferred both by Reason of Dependency and because engaged in Essential War Production
Class III-C: Deferred both because of Dependency and because Engaged in Agriculture essential to War Effort
Class IV-A: Aged 45 or over; Man Who has Completed Military Service
Class IV-B: Official Deferred by Law
Class IV-C: Aliens not Acceptable for Training and Service
Class IV-D: Minister of Religion or Divinity Student
Class IV-E: Available for civilian Work of National Importance (Conscientious Objector)
Class IV-F: Physically, Mentally, or Morally Unfit
Class IV-H: Deferred as Over Age, Unacceptable to Army

During 1943 instructions about limited service classifications were changed several times. At present no specific designation of this sort is given by the local boards, but at the time of the induction examination men may be accepted and assigned to limited service.

For a short period in 1941 men over 28 were given the Classification I-H. After Pearl Harbor no more such classifications were assigned, and the classification itself was abolished Nov. 19, 1942. After men of 38 were deemed unacceptable for service they were at first given a classification IV-H, but since May 1, 1943, this has been discontinued, and all men in IV-H were ordered classified anew. To indicate the fact that a registrant is between the ages of 38 and 45 he is now identified by the addition of the letter "(H)" following his classification, for example: Class I-A(H), II-B(H), IV-F(H). IV-A continues to be assigned to registrants who become 45 years of age.

The principal changes made in the classification system during 1943 were as follows:

Class II-A now means necessary in the war effort, which includes war training programs. II-B, while continuing to mean necessary in war production, now implies a much stricter interpretation of *necessary*. Federal Government employees must go through a special procedure (as described above) to entitle them to either Class II-A or II-B. Classes II-C and III-C, unlike other deferments which last at most for six months, last as long as the man remains engaged in agriculture.

Class III-B was eliminated Apr. 12, 1943. No III-A classifications have been assigned since Dec. 11, 1943, and those now in III-A are to be reclassified as available for service (I-A, I-A-O, IV-E), or, according to their occupation (II-A, II-B, III-C), or into a new classification, III-D (created Apr. 12, 1943), defined as "Man deferred by reason of extreme hardship and privation to wife, child, or parent."

Classification Now in Force

Class I-A: Available for military service
Class I-A-O: Available for noncombatant military service; conscientious objector
Class I-C: Member of land or Naval forces of U.S.
Class II-A: Man necessary in support of war effort
Class II-B: Man necessary in war production

Class II-C: Man deferred by reason of his agricultural occupation or endeavor
 Class III-C: Man deferred both by reason of dependency and agricultural or occupational endeavor
 Class III-D: Man deferred by reason of extreme hardship and privation to wife, child, or parent
 Class IV-A: Man deferred by reason of age
 Class IV-B: Official deferred by law
 Class IV-C: Aliens
 Class IV-D: Minister of religion or divinity student
 Class IV-E: Available for work of national importance; conscientious objector
 Class IV-F: Physically, mentally, or, morally unfit

Induction. The Selective Service Act provided that men be inducted into the Army under the quota system, on the basis of the actual number of men in the various territorial subdivisions, who are liable for training and service but who are not deferred after classification. In fixing the quotas, credit is to be given for residents of the subdivision who were already members of the land or naval forces, and for those who subsequently volunteered for service. Executive Order No. 9279 of Dec. 5, 1942, prohibits all branches of the armed forces from accepting as volunteers any man between 18 and 38, and prescribes that no men in that age group "shall be inducted into the enlisted personnel of the armed forces except under provisions of the Selective Service Act of 1940." Thus Selective Service becomes the sole procurement agency in this age group.

The original limitation on the total number to be inducted (900,000 in peacetime) had been removed after war was declared, and monthly quota calls were greatly increased. On the basis of requests from the armed forces State quotas are assigned, and these again are allocated locally. When the men are delivered to the local induction center, they may express a preference for a particular branch of the armed services, and, after considering the particular qualification of each man to be inducted, an attempt is made to relate these requests to the current needs of each branch. Recent controversy on the "size of the Army" revolves around how many men can be taken into this general pattern with the least possible disturbance to war production, while maintaining essential civilian activities.

In the summer of 1943 the Army announced a reduction in the estimate of its total needs by about half a million men, but the Navy has steadily increased its calls. On Aug. 21, 1943, General Hershey wrote to the local boards: "There have been inducted or enlisted in the Army or Navy approximately 10 million men." Over a six-months' period (July 1-Dec. 31, 1943) calls through Selective Service, actual and estimated, averaged about 300,000 per month. The reduced estimate of the Army called for 7,700,000 men by the end of 1943, but largely because of the uncertainty about the status of "father" many local boards failed to meet their quotas for the last three months of the year.

Future needs will be conditioned by variable factors, such as the length of the war, the number of casualties, and the number of rejections at induction centers. Testimony of General Marshall and Admiral King before the Senate Military Affairs Committee (Sept. 20, 1943) aimed to show that global strategy is based on the assurance of an uninterrupted flow of properly qualified replacements. To insure this, the quota calls for January, 1944, come to about 300,000 men. To secure this number, even after all present classifications are reviewed, which should result in making available more men from IV-F and also from the group now deferred for occupational reasons in both private and Federal employment, it has been officially an-

nounced that almost half a million fathers will have to be inducted.

The problems attendant upon the induction of a few thousands each month in the last part of 1940, when civilian life was little affected by war conditions, and the problems of 1943, when the monthly calls sometimes approached half a million, while the demands for manpower in war production continued to increase, have many differences, but few changes have been necessary in the Selective Service System. In general, the same local boards and appeal boards, the same lawyers, doctors, and dentists continue to give freely their time and effort. There is good reason to believe that the statement made a year ago in the Gallup Poll remains true: "Virtually no one interviewed thought the draft boards were not trying to do an honest and conscientious job."

Conscientious Objectors. The problem of the conscientious objector has been recognized from the start. The Selective Service Act states: "Nothing in this Act shall be construed to require any person to be subject to combatant training and service in the land or naval forces of the United States who, by reason of religious training and belief, is conscientiously opposed to participation in war in any form." The decision for classification of conscientious objectors rests, as in the case of other classifications, with the local boards. There are two types of objectors, those who are willing to render noncombatant service and are assigned to Class I-A-O, and those unwilling to render any kind of military service, and who are placed in IV-E. These, instead of being inducted, are, in accordance with the Act, "assigned to work of national importance." At the induction stations all are given the same type of examination as that given to all other registrants, and those who fail are placed in IV-F. Those in I-A-O are assigned to service in the Medical Department, which does not require the use of arms.

The numbers involved are constantly changing, but there have never been at any one time many more than 10,000 who are classified as IV-E, representing a trifle less than .04 per cent of the total number of registrants. These figures do not give an exact picture of the number of those who have conscientious objections against war. The objector, like all other registrants, may be entitled to deferment on the grounds of occupation or dependency, and until or unless such deferment is cancelled, the issue would not be raised. The objector receives the same treatment as all other registrants. For instance, since men over 38 are no longer acceptable to the armed forces, the same age group of conscientious objectors is at present exempt from service.

The Selective Service System has established in its National Headquarters a Camp Operations Division, which assigns Class IV-E men to camps and projects of "national importance," and over which it maintains supervision. The number and variety of these projects show great increase. At the end of 1942 there were 66 in operation; during 1943, 16 of these were discontinued; the present number in operation is 99. Federal funds are used in two of these projects (178 men), and in some units working on Weather in the Geodetic Survey; all others are financed by the different religious groups, who maintain a central administrative office for the purpose. None of the men receives compensation, beyond very small sums for laundry, and other incidental expenses, and whenever possible, each individual pays \$30 per month for his own maintenance. Transportation and incidental

expenses involved in going to the camps is borne by the Federal Government.

In December, 1943, there were 6,789 men at the 99 "Camps." Of these 3,750 were in actual work camps run by the Department of Agriculture; 1,303 were assigned to projects under the Department of Interior, such as work in the National Parks, Reclamation Bureau, Fish and Wildlife Service; 1,358 were working as attendants in mental hospitals—a project steadily expanding; 103 were in agricultural experiment stations; 58 with the Department of Commerce (Geodetic Survey, Weather Bureau, etc.); 68 were on Public Health projects; and 149 engaged in miscellaneous enterprises endorsed by this special division of Selective Service. This miscellaneous group includes 83 working under the auspices of the National Research Council, and allowing themselves to be used as "human guinea pigs." One unit is living under certain conditions while infested with body lice, the purpose being to experiment with anti-typhus measures; another unit is drinking sea water in an effort to determine how much may be taken without harmful effect; a third group is engaged in experiments in nutrition.

Since the camps were initiated, about 1,100 men have been discharged for reasons of health or age. About 500 have admitted a change in their attitude toward war, and after discharge from the camps have been reclassified by their local boards in I-A-O, I-A, or I-C.

Contrary to popular impression, conscientious objectors are not confined to a few religious denominations. Those now at the Camps come from 141 different groups. The three well recognized sects, the Mennonites, Society of Friends, and the Church of the Brethren number 2,477, 579, and 911 respectively. There are 202 Jehovah's Witnesses, but there are also 577 Methodists, 162 Baptists, and 104 Catholics.

Delinquents. Selective Service Regulations define a delinquent as "a man liable for training and service under the provisions of the Selective Training and Service Act of 1940, as amended, who fails or neglects to perform any duty required of him under the provisions of the Selective Service Act of 1940, as amended, and regulations made pursuant thereto."

On Jan. 4, 1943, it was announced that all registrants between 18 and 45, in any age group which had been subject to registration for military service for at least six months, must after February 1, always carry with them both their registration certificates and their classification cards. Beginning November 1, all men (18 to 38), who are subject to Selective Service, but are delinquent, will be classified into Class I-A immediately, and ordered to report for induction. Delinquents who do not respond to such orders will be reported to U.S. attorneys for prosecution under the Selective Service Act, which provides a maximum fine of \$10,000 or five years in prison, or both, for persons who violate provisions of the law or rules and regulations promulgated thereunder.

A general round-up by the FBI has been in process since November 1, and about 90,000 persons held for questioning, approximately three-tenths of 1 per cent of all registrants. Technically, many more than that might be deemed guilty at any one time, since many seemingly trivial omissions are yet in the eyes of the law reasons for considering a man delinquent. For instance, failure to return questionnaires within ten days, failure to keep the local board informed promptly of any

change of address or change of status (marriage, divorce, birth or death of dependents, change of occupation) render a man delinquent, as well as failure to register or to report for physical examination or for induction.

Although there has been considerable newspaper comment on delinquents or "draft dodgers," the problem has never assumed any considerable proportions. Selective Service Regulations have met with general approval, and the decentralization of the administrative machinery has taken the law enforcement into small units where the status of each individual is known, and evasion is unlikely to be condoned.

Law Enforcement. During the second year of the war, the courts made it increasingly clear that they would not interfere with Selective Service operations. Attempts to secure judicial review of classifications prior to induction were unsuccessful, and the scope of review after induction was further limited. The constitutionality of the Conscientious Objector program was upheld. Vigorous enforcement of the Act is apparent from the fact that 4,422 convictions were obtained as against 2,847 for the first year of the war. The total convictions since October, 1940, became 7,895. Jehovah's Witnesses accounted for 1,407 of the convictions during the year and for 1,893 of the convictions since October, 1940. The FBI started with 44,644 Selective Service cases on Nov. 30, 1942, closed out 90,506 cases during the year, and had 39,372 cases pending on Nov. 30, 1943. Since Oct. 16, 1940, the FBI has closed a total of 171,165 cases. Under the special Selective Service parole provisions 444 violators of the Act were recommended for parole by the Director of Selective Service. Of these, 359 were recommended for induction into the land or naval forces, 64 for assignment to Civilian Public Service Camps for conscientious objectors, and 21 for special service to be designated by the Attorney General. During the year, 124 special local boards were established in Federal and State penal and correctional institutions for the purpose of processing inmates of such institutions other than violators of the Act. Out of 5,261 men placed in Class I-A as available for military service, 2,126 were sent to induction stations and 1,075 were inducted into the land or naval forces.

See **FEDERAL BUREAU OF INVESTIGATION; LAW under War Decisions; PRISONS; PSYCHIATRY; UNITED STATES under Armed Forces.**

LEWIS B. HERSHEY.

SENATE, U.S. The membership of the U.S. Senate at its assembly on Jan. 10, 1944, is shown in the accompanying list. Political affiliation may be determined by the following, with the number of members in parentheses: Democrats in roman (58); Republicans in *italic* (37); Progressives in SMALL CAPS (1); no vacancies; total, 96. Senator Frederick Van Nuys, Democrat from Indiana, died on January 25 and Samuel D. Jackson was appointed to fill out the unexpired term. On Feb. 8, 1944, Sinclair Weeks was appointed to succeed Henry Cabot Lodge, Jr. (of Massachusetts) who resigned, Feb. 4, 1944, in order to go on active duty with the U.S. Army. (For activities, see **UNITED STATES.**)

<i>Name</i>	<i>State</i>	<i>City</i>
Aiken, George D.	Vt.	Putney
Andrews, Charles O.	Fla.	Orlando
Austin, Warren R.	Vt.	Burlington
Bailey, Josiah W.	N.C.	Raleigh
Ball, Joseph H.	Minn.	St. Paul
Bankhead, John H.	Ala.	Jasper
Barkley, Alben W.	Ky.	Paducah

Name	State	City
Bilbo, Theodore G.	Miss.	Poplarville
Bone, Homer T.	Wash.	Tacoma
Brewster, Ralph O.	Me.	Dexter
Bridges, Styles	N.H.	Concord
Brooks, C. Wayland	Ill.	Chicago
Buck, C. Douglass	Del.	Wilmington
Burton, Harold H.	Ohio	Cleveland
Bushfield, Harlan J.	S.D.	Miller
Buller, Hugh A.	Neb.	Omaha
Byrd, Harry Flood	Va.	Berryville
Capper, Arthur	Kan.	Topeka
Caraway, Hattie W.	Ark.	Jonesboro
Chandler, Albert B.	Ky.	Versailles
Chavez, Dennis	N.M.	Albuquerque
Clark, Bennett Champ	Mo.	University City
Clark, D. Worth	Idaho	Pocatello
Connally, Tom	Tex.	Marlin
Danaher, John A.	Conn.	Portland
Davis, James J.	Pa.	Pittsburgh
Downey, Sheridan	Calif.	Claremont
Eastland, James O.	Miss.	Ruleville
Ellender, Allen J.	La.	Houma
Ferguson, Homer	Mich.	Detroit
George, Walter F.	Ca.	Vienna
Gerry, Peter G.	E.I.	Warwick
Gillette, Guy M.	Iowa	Cherokee
Glass, Carter	Va.	Lynchburg
Green, Theodore Francis	E.I.	Providence
Guffey, Joseph F.	Pa.	Pittsburgh
Gurney, Chan	S.D.	Yankton
Hatch, Carl A.	N.M.	Clovis
Hawkes, Albert W.	N.J.	Montclair
Hayden, Carl	Ariz.	Phoenix
Hill, Lister	Ala.	Montgomery
Holman, Rufus C.	Ore.	Portland
Johnson, Edwin C.	Colo.	Craig
Johnson, Hiram W.	Calif.	San Francisco
Kilgore, Harley M.	W.Va.	Beeckley
LA FOLLETTE, ROBERT M., JR.	Wis.	Madison
Langer, William	N.D.	Bismarck
Lodge, Henry Cabot, Jr.	Mass.	Beverly
Lucas, Scott W.	Ill.	Havana
McCarran, Pat.	Nev.	Reno
McClellan, John L.	Ark.	Camden
McFarland, Ernest W.	Ariz.	Florence
McKellar, Kenneth	Tenn.	Memphis
McNary, Charles L.	Ore.	Salem, R. F. D.
Maloney, Francis	Conn.	Meriden
Maybank, Burnet R.	S.C.	Charleston
Mead, James M.	N.Y.	Buffalo
Millican, Eugene D.	Colo.	Denver
Moore, E. H.	Okla.	Tulsa
Murdock, Abe	Utah	Beaver
Murray, James E.	Mont.	Butte
Nye, Gerald P.	N.D.	Cooperstown
O'Daniel, W. Lee	Tex.	Fort Worth
O'Mahoney, Joseph C.	Wyo.	Cheyenne
Overton, John H.	La.	Alexandria
Pepper, Claude	Fla.	Tallahassee
Radcliffe, George L.	Md.	Baltimore
Reed, Clyde M.	Kan.	Parsons
Revercomb, Chapman	W.Va.	Charleston
Reynolds, Robert R.	N.C.	Asheville
Robertson, Edward V.	Wyo.	Cody
Russell, Richard B.	Ca.	Winder
Scruggam, James G.	Nev.	Reno
Shiptead, Henrik	Minn.	Miltna
Smith, Ellison D.	S.C.	Lynchburg
Stewart, Tom	Tenn.	Winchester
Taft, Robert A.	Ohio	Cincinnati
Thomas, Elbert D.	Utah	Salt Lake City
Thomas, Elmer	Okla.	Medicine Park
Thomas, John	Idaho	Gooding
Tobey, Charles W.	N.H.	Temple
Truman, Harry S.	Mo.	Independence
Tunnell, James M.	Del.	Georgetown
Tydings, Millard E.	Md.	Havre de Grace
Vandenberg, Arthur H.	Mich.	Grand Rapids
Van Nuys, Frederick	Ind.	Indianapolis
Wagner, Robert F.	N.Y.	New York City
Wallgren, Mon C.	Wash.	Everett
Walsh, Arthur	N.J.	South Orange
Walsh, David I.	Mass.	Clinton
Wheeler, Burton K.	Mont.	Butte
Wherry, Kenneth S.	Neb.	Pawnee City
White, Wallace H., Jr.	Me.	Auburn
Wiley, Alexander	Wis.	Chippewa Falls
Willis, Raymond E.	Ind.	Angola
Wilson, George A.	Iowa	Des Moines

SENEGAL. See FRENCH WEST AFRICA.

SERBIA. See YUGOSLAVIA.

SERVICE INDUSTRIES. See LIVING COSTS.

SERVICE MEN. See topics listed under ARMED FORCES. For Vote, see UNITED STATES.

SEWAGE DISPOSAL, SEWERAGE. See SANITATION.

SEWING, Home. See FASHION EVENTS.

SEYCHELLES. A British colony in the Indian Ocean, northeast of Madagascar. It comprises a group of 92 islands (the largest are Mahé, 55 sq. mi. and Praslin, 15 sq. mi.). Total area, 156 square miles. Population, 32,150 on Jan. 1, 1941. Capital, Victoria, on the island of Mahé. Statistics for 1940: Births, 839; deaths, 365; marriages, 153; imports, Rs1,090,076 (rupee averaged \$0.3016 in 1940); exports, Rs1,180,895; shipping, 336,941 tons entered in 1939. Total revenues for 1942 were estimated at Rs761,962; expenditures, Rs715,229. Copra, cinnamon, essential oils, guano, and fish are the principal products. Administration is in the hands of a Governor, assisted by executive and legislative councils. Governor, William M. Logan (app. Jan. 5, 1942).

SHADA. See HAITI under History.

SHANGHAI. See CHINA under Area and Population and History.

SHAN STATES. See BURMA and THAILAND under History.

SHEEP. See HIDES, LEATHER, AND SHOES; LIVE-SHEEP.

SHELL SHOCK. See PSYCHOLOGY under Rehabilitation of the War Injured.

SHIPBUILDING. A review of merchant shipbuilding records in the United States for 1943 shows that few large shipyards were established and that shipbuilding activities were concentrated in yards operating in 1942. Thus 1943 has been largely a ship-production year, while 1941 and 1942 were devoted to the establishing and equipping of yards and the getting together of organizations to build ships. The controlling Federal agency in the United States for merchant-ship construction is the Maritime Commission (q.v.).

In Canada, the building of ships is under the control of the Wartime Merchant Shipping, Ltd. One of the designs developed is of a small cargo vessel of about 4,700 tons deadweight, many of which have been built and are engaged in coast-wise and trans-Atlantic service. Another design is of a larger ship similar to the Liberty type of the Maritime Commission, with Scotch boilers and triple expansion engines.

Great Britain has turned out several standardized cargo vessels, which in general are like the U.S. Liberty, except that the British types are coal burners. Prime Minister Winston Churchill in an address before the House of Commons, on Sept. 21, 1943, stated, "The output of new building from the United States has fulfilled all that I ever hoped for from it and more. We build our regular quota in these islands, and the Canadian output, an entirely new development for Canada, is remarkable. The credit balance of new building over losses for all times, including marine risks since the beginning of the year—the net gain, that is to say—exceeds 6,000,000 tons, and should the present favorable condition hold, we shall soon have replaced all the losses suffered by the United Nations since the beginning of the War."

Ship Construction. All merchant shipbuilding under the control of the Maritime Commission is now related to war activities. The commercial vessels designed and built for, or under the supervision of, the Maritime Commission have been largely standardized, and include cargo vessels, tankers, barges, lighters, and towboats. Of these, the largest orders have been placed for cargo ships; the new Victory of 1943 is faster than the Liberty.

Victory ships have nearly completely welded hulls and are driven by geared turbines, steam

being furnished by water tube boilers. The keel of the first Victory ship was laid on November 28, and is scheduled for launching Jan. 16, 1944. Contracts for about 300 of them have been awarded. Data on Victory and Liberty ships follow:

	<i>Victory</i>	<i>Liberty</i>
Length.....	455 ft.	441.5 ft.
Beam.....	62 ft.	57 ft.
Deadweight tonnage.....	10,800	10,800
Cargo tonnage.....	9,146	9,146
Decks.....	3	2
Engine H. P.....	6,000 or over	2,500
Propulsion.....	Geared steam turbines.	Triple expansion engine.
Speed.....	15 knots.	11 knots.

Several hundred Liberty ships were completed in 1943; the one thousandth Liberty ship, viz, *Robert Lowry*, was put in commission May 25, 1943.

Next in importance to cargo ships are tankers, contracts for large numbers of which were placed with Pacific and Atlantic Coast yards, as well as those on the Gulf. Most of them were along general lines of previous designs, with changes made in hull construction and machinery installations that were found to be desirable. Contracts were awarded for small coastal tankers, and for 4,000-ton (deadweight) ocean-going Diesel-driven ships, to yards on the Great Lakes, and on the Atlantic and Pacific coasts.

Because of the demand for tonnage of all kinds early in 1943, particularly for the shipment of oil, orders were placed for more than 100 concrete barges. However, as by early summer the acute demand for such barges had passed, the original orders were reduced. To serve cargo ships and tankers when in port, many towboats, wood barges, and lighters were built for the Maritime Commission. Some of the towboats were for ocean service, others for harbor use; particularly all for both purposes were driven by Diesel engines.

Since most of the craft mentioned above were designed of steel, and were urgently needed, welding procedures for rapid construction were given considerable study by the Maritime Commission, the American Bureau of Shipping, and shipyards. This was particularly true after the tanker *Schenectady*, built at a Pacific coast yard, suddenly cracked and sank at her dock. The reason for this was laid to a variety of causes, but greater care has since been exercised in welding, with the result there have been no further accidents of this kind to tankers or to cargo ships.

Automatic arc and oxy-acetylene welding apparatus are on the market for the fabricating of tank tops, decks, and large surfaces of steel plates. Flush joints on shell plating are now common practice, as with them frame liners are not required, nor is it necessary to joggle plates or frames. With lap joints no edge preparation of plates is necessary, as it is with flush. Arc stud welders are now extensively employed for fastening studs to steel decks, thus replacing through bolts for wood deck fastenings. Other applications of arc welded studs are for cable hangers and straps for supporting ventilation ducts, piping, and fiber glass insulation. Oxy-acetylene cutting flame is now used for preparing plate edges for welding, and for cutting plates in straight lines, circles, and irregular shapes. Another use is the removing of rust and scale from steel before painting.

Further developments were made in 1943 in the mass production of ships by assembly-line methods (see below under *Production*). But the remarkable rate at which ships were turned out

would not have been possible without welded construction and the standardization of designs. In fact, one yard, the Oregon Shipbuilding Co., Portland, Ore., launched 24 Liberty ships in September, 1943. In the east, the Bethlehem-Fairfield Shipyard, Baltimore, Md., claimed an Atlantic coast record with the launching of the Liberty ship *Edith Wharton* in 21 days.

Marine Engineering. Boilers, turbines, Diesel engines, and their auxiliaries have been improved in the past year. Designs have been changed where necessary to secure higher efficiency and improved manufacturing methods. Simplification of design and standardization conserved materials and made faster machining and assembling in shops possible. For instance, from a study of the types of geared turbines it was found that the previous number of 27 could be reduced to 9. Similarly, turbine-generator sets for power and light were cut from 77 to 17.

The trend for boilers is the continued development of high pressure water tube, with superheaters, oil fired. For such boilers there is on the market combustion control equipment with which excellent operating efficiency is secured; they are superior to Scotch boilers for modern high-speed merchant vessels. Boiler feedwater systems are now installed, so there are only a few degrees difference in temperature between the feedwater and the water in the boiler. With such systems boilers will generate more steam per pound of fuel burned and thus increase the steaming radius of a vessel.

Turbines for ship drives were improved in design and construction, as also were reduction gears. Large orders were placed for turbines and reduction gears for installation in cargo ships and in tankers. Turbine electric drives consisting of a turbine-generator unit furnishing current to an electric propulsion motor have been ordered for many tankers. The best efficiency of a high speed turbine is obtained from this electric drive, and the propeller run most economically when operated on a low speed propulsion motor. But for steam-operated cargo ships, a turbine driving the propeller through reduction gears is a simpler form of drive and is generally preferable to a turbine electric.

With boilers equipped with superheaters supplying high pressure superheated steam to turbines, it was necessary to modernize piping systems, as previous designs of valves and fittings, and the materials used in them, would not do. To meet high-pressure high-temperature steam requirements resort was had to either alloy steel pipe with special flanged joints, or to alloy steel pipe with welded forged steel elbows, tees, and other fittings. Because of limited room in ships, frequently making welding impossible, flanged joints are installed instead of welded. Welded pipe lines have advantages such as a saving in weight (for no flanges, bolts, nuts, and gaskets are required) and freedom from leaky flanges. When several ships are built off the same drawings, steam, oil, and other piping systems can be fabricated by an outside contractor and shipped to the yard for installation. This procedure was followed on many Maritime Commission ships, speeding up their construction.

Improvements have been made in Diesel engines, which also have been standardized for rapid building. Large single Diesels driving the propeller direct through shafting have been installed on cargo vessels and tankers. Another arrangement suitable for ships engaged in certain trades

is to have two or more comparatively small high-speed Diesels propel the ship through reduction gears and electro-magnetic couplings. Some ships have four high-speed Diesels, others two. Diesel electric drives have been installed in ferryboats and towboats. Such drives are particularly suited where speeds are frequently changed, as from full speed ahead to full speed astern, as may be necessary when a towboat is docking a vessel. The exhaust from a Diesel engine is now utilized in waste heat boilers for heating the ship and for other purposes.

Besides the large number of turbines and Diesel engines ordered by the Maritime Commission, the Commission made studies of steam engines, on which quicker deliveries could be obtained than on turbines and Diesels. From these studies, an engine was designed having greater power than those in the original Liberty ships, and it will be installed in several contracted for in 1943. During the past year, 13 plants were building steam turbine propulsion machinery, 11 were building steam engines for Liberty ships, and over 8, Diesel engines.

Production. Increased production of merchant vessels in the United States has been brought about by reducing the number of types, standardizing designs, and streamlining assembling methods. Prior to work in the yard, arrangement drawings of a ship are gone over by the production manager and yard superintendent, who mark the hull into sections and outline the steps to take in their fabrication. The size of a section largely depends on the crane capacities of the yard, and the ease with which sections can be handled. Each consists of plates and shapes welded together in different parts of the yard. After assembling it is taken to the building way where it is joined by welding, or if this is not practical then by riveting, to adjacent sections. Frequently bulkheads are completely assembled and then lowered in their proper position in the hull.

As sections are large, bulky, and heavy, it is evident that, when eight or ten ships are being built at the same time, a large land area is required, with a deep water front. Some yards, on the Great Lakes and in Southern States, for example, are so located that it is desirable to build vessels parallel to the water front and side-launch them. However, most yards on the Atlantic and Pacific coasts build vessels that are launched stern first, as by so doing less water front is needed.

Stem, sternpost, rudder post, and other heavy castings and forging are purchased by the yard, as are boilers, turbines, condensers, pumps, Diesel engines, and mechanical and electrical equipment, so a yard building standardized ships has now developed into an assembling plant. The laying out of a ship, plus the writing of specifications, necessitates the employment of a large number of naval architects, marine engineers, hull and engine draftsmen. Besides these, production men are required to plan the placing and delivering of orders so that work in the yard will go on continuously without workers waiting for materials and equipment. The technique and procedures followed in many United States shipyards have resulted in turning out Maritime Commission standardized ships at a rate that a year or so ago would have been thought impossible. It has been demonstrated that a ship can be prefabricated to such a degree that it can be assembled on the ways and launched in four days.

The Maritime Commission announced in March, 1943, that United States yards had increased pro-

duction to five ships a day. This goal was attained two months ahead of schedule, and represents an annual production of 18,000,000 deadweight tons. The volume of production is about 51 per cent for the West Coast yards, 37 for East Coast, and 12 for Gulf. Approximately 40 per cent more tankers were delivered in the first seven months of 1943 than during the entire year 1942.

At the semi-annual meeting of the American Bureau of Shipping, New York, on July 27, 1943, President J. L. Luckenbach reported: "Production of merchant types of sea going vessels over 2,000 gross tons in the United States during the first six months of 1943 has more than equaled the output for the entire year of 1942. The unprecedented volume of merchant vessel completions in the first six months of 1943 includes 65 tankers of over 1,000,000 deadweight tons, and 696 cargo vessels of almost 7,350,000 deadweight tons, plus five large vessels of the combined passenger and cargo type. Of the cargo ships, 608 were of the emergency Liberty ship type, and the balance were of the higher speed C-1, C-2, and C-3 basic design cargo ships. Thus, cargo ships and tankers are now being produced at twice the rate averaged in 1942, when 652 freighters were finished, of which 542 were Liberty ships, and 61 tankers."

It is estimated that in 1944 approximately 2,000 commercial vessels will be built in the United States, having a total tonnage of 21,000,000 deadweight tons, compared with 19,000,000 in 1943, and 8,090,000 in 1942. Of those scheduled for completion in 1944, about 320 will be the fast Victory ships, and the remainder Liberty ships, tankers, coastwise vessels, and the combination passenger-cargo C type developed by the Maritime Commission for peacetime service.

The second anniversary of Victory Fleet Day was celebrated Sept. 27, 1943, with appropriate ceremonies at shipyards and allied plants. In September, 1941, when the *Patrick Henry* slid down the ways as the first Liberty ship (see photo in *YEAR BOOK* for 1941) there were 21 shipyards with about 100 ways employed in the ocean-going merchant shipbuilding program. In October, 1943, approximately 70 yards, with more than 300 ways, were delivering more than five ships a day. These yards are expected to step up production still further so as to deliver six ships a day. Two years ago the industry employed about 200,000 men. Late in 1943, over 900,000 men and women were employed in shipyards alone, and more than a million others in plants throughout the United States were producing materials for ship construction. (See also SHIPPING under *Labor*.)

See CONSTRUCTION INDUSTRY; ELECTRICAL INDUSTRIES; FOUNDATIONS; IRON AND STEEL; MACHINERY INDUSTRY; MARITIME COMMISSION; WORLD WAR under *The War at Sea*.

CHAS. H. HUGHES.

SHIPBUILDING STABILIZATION COMMITTEE. See SHIPPING under *Labor and Training*.

SHIPPING. During 1943 the Maritime Commission and War Shipping Administration continued to operate or control matters relating to commercial overseas shipments, and to cooperate with Army and Navy activities. In Canada, there functioned the Park Steamship Co., Ltd., that supervises and controls the operating of cargo vessels built in Canada. It operates along similar lines to the War Shipping Administration, as does also the British Ministry of War Transport. To coordinate operations of the War Shipping Administration and

British Ministry of War Transport, there was established the Combined Shipping Adjustment Board by President Roosevelt and Prime Minister Churchill in January, 1942, which continued through 1943 in the pooling of tonnage for military and other purposes. See MARITIME COMMISSION.

Rear Admiral E. S. Land, U.S.N. (retired) chairman of the War Shipping Administration in an address on May 22nd (Maritime Day) stated that "Judicious allocation of tonnage is one of the prime considerations of the Administration. In February, 1943, the record showed that 42 per cent of our dry cargo tonnage had been allocated to Army operations, 13 per cent to Navy, 30 per cent to Lend-Lease, and 15 per cent devoted mainly to maintaining our essential civilian economy and that of our territories and possessions, and in service of our neighbors in South and Central America. In other words, there was 16 per cent of the tonnage of this nation devoted to civilian use."

From data compiled by the American Merchant Marine Institute of New York, United States merchant ships are carrying almost as much cargo in one month as during an entire year of the First World War. The largest monthly total in the first year of the First World War was 450,000 tons, whereas in the first full month of the present war, 1,500,000 tons were carried. Of the number of vessels loaded with lend-lease materials, the War Shipping Administration announced that 1,375 had sailed to Great Britain, 304 to Russia, and 66 to China in the year ending Oct. 31, 1942.

The replacement of outstanding vessel charters with new contracts was taken up with operators in May by the War Shipping Administration. From conferences it was decided that new contracts for bare boat and for time charter will carry lower rates. The annual Maritime Day edition of the N.Y. *Journal of Commerce* published the maximum freight rates on bulk and general cargoes tabulated by routes and commodities. The rates subject to revision by war conditions apply to all vessels operating under the jurisdiction of the War Shipping Administration. The sale, transfer, and charter of vessels without the prior approval of the Office of Defense Transportation or the War Shipping Administration was prohibited by joint action of these two agencies in July, 1943.

Materially lower freight rate surcharges on petroleum, petroleum products, and other liquid cargo shipments into and between foreign areas were announced early in September, 1943, by the War Shipping Administration. The surcharges, effective September 22, covered various bulk liquid cargoes being transported over many sea routes. Fourteen of the new rate schedules apply to petroleum, two to liquid caustic soda, and one each to molasses, creosote, benzol, and liquid wax. A sharp slash was made in the rate on cargoes of petroleum from the Netherlands West Indies and U.S. Gulf ports to the Portland Pipe Line and to Halifax, Nova Scotia. The reduction in these surcharges reflects the generally improved conditions in the various trade areas involved.

Postwar shipping activities were given considerable attention during the past year. The Maritime Commission organized a committee to make further studies of shipping routes and types of ships required for them. The American Merchant Marine Institute prepared a plan, the major points in which were: (1) Ultimate transfer of all government-owned merchant vessels to private owners; (2) seizure of Axis trade routes for the United States; (3) creation of a reserve shipping pool of at least 5,000,000 deadweight tons to be kept idle for

future emergencies; (4) increased participation by the United States in foreign, tramp, and indirect shipping, particularly in carrying American goods abroad; (5) continuation of the Maritime Commission's expansion program.

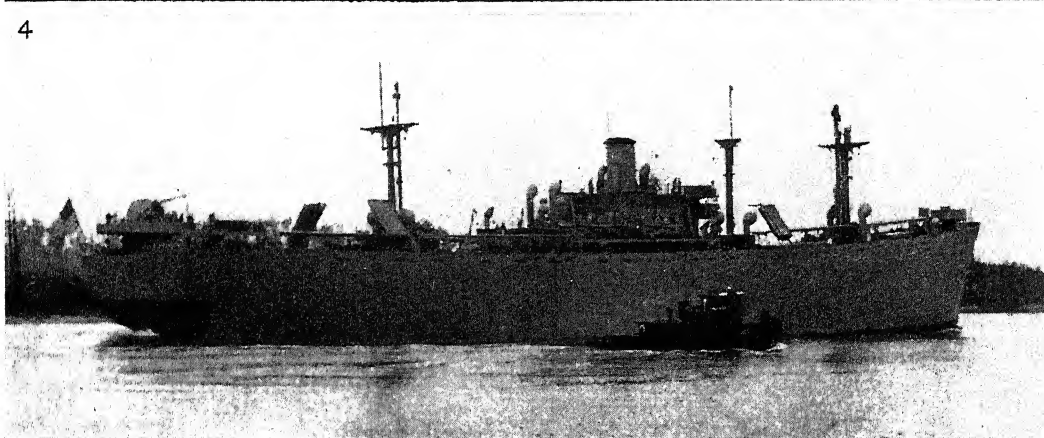
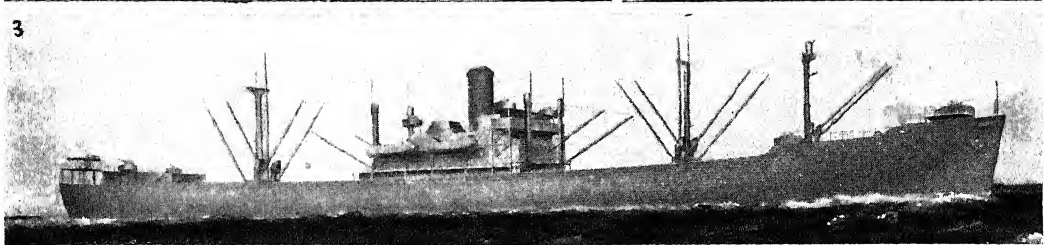
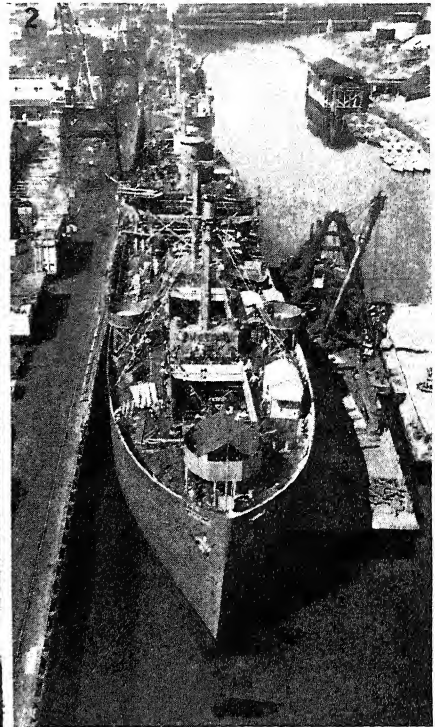
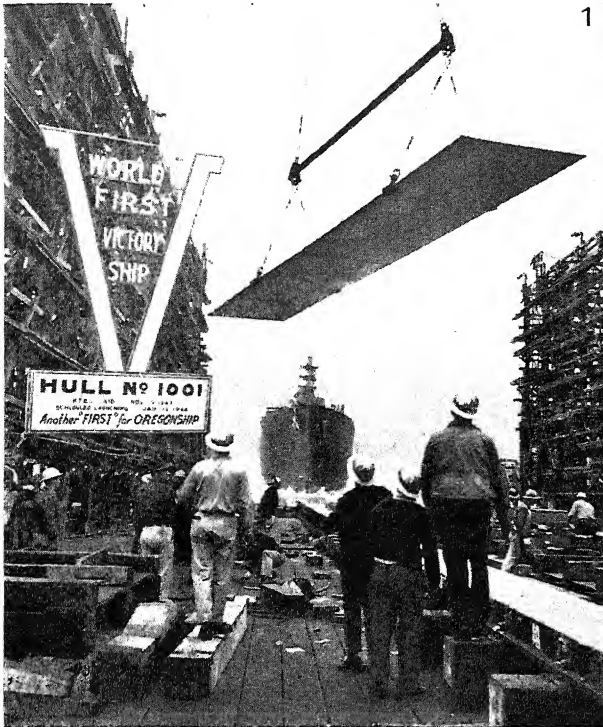
Shipping on the Great Lakes, because of ice, was nearly a month late in getting started in 1943. The late start was a serious handicap in the handling of the 94,000,000 tons of ore set by the Office of Defense Transportation as the quota from the mines in Minnesota to the steel mills on Lakes Michigan and Erie, and to the Pittsburgh district. Notwithstanding unfavorable spring conditions, large ore and coal shipments were made on the Great Lakes that compare favorably with those of previous years. The Lake Carriers Association, Cleveland, Ohio, reported that during the month of October a total of 11,612,542 gross tons of iron ore were transported via the Great Lakes, bringing the 1943 total, to November 1, to 76,784,357 gross tons. Coal shipments for the season to November 8 totaled 41,042,286 net tons. The fleet of American bulk freighters has been increased in 1943 by the completion of 16 large vessels built for the account of the Maritime Commission and subsequently sold to Great Lakes operators. One ore carrier was lost in 1943 so that the net addition to the fleet was 15 ships.

Marine Losses and Insurance. The number of Allied merchant ships sunk by German, Italian, and Japanese submarines and aircraft is a war secret. However, it is known that the activities of German submarines in the North Atlantic Ocean, and on routes to South America and the Far East, have been materially curtailed. This has been brought about by improved convoy methods, including use of aircraft carriers, specially designed escort vessels, torpedo boat destroyers, and land based aircraft. Little authentic information has been published by Germany, Italy, and Japan on their merchant vessel losses. Secretary of the U.S. Navy Frank Knox, in September, 1943, gave out figures on Japanese losses which showed that Japan has about 5,000,000 tons of merchant shipping left, of a prewar total (December, 1941) of 6,300,000. The replacement capacity is estimated at approximately 800,000 tons annually, so the net yearly Japanese loss in ship tonnage is from 700,000 to 1,000,000 tons.

In regard to Allied sinkings, for military reasons the location and time of a sinking are never reported. The Truman Committee of the U.S. Senate stated on April 21, 1943, that approximately 12,000,000 tons of Allied shipping were sunk in 1942, which was more than the total tonnage built by the United States and Great Britain. Of the total built, the United States turned out 746 merchant ships, having a tonnage of 8,090,000. Considering these figures with improved convoy methods, increased losses of and decreased building of German submarines due to air raids, plus the speed at which ships are now built in the United States—the trend is decidedly in favor of the Allies.

Prime Minister Winston Churchill in an address before the House of Commons, on Sept. 21, 1943, said "that for the four months which ended September 18th, no merchant vessel was sunk by enemy action in the North Atlantic. The month of August was the lowest month we have ever had since the United States entered the War, and was less than half the average of British and Allied sinkings in the fifteen months preceding the American entry into the War. In the first fortnight of September no Allied ships were sunk by U boat action in any part of the world."

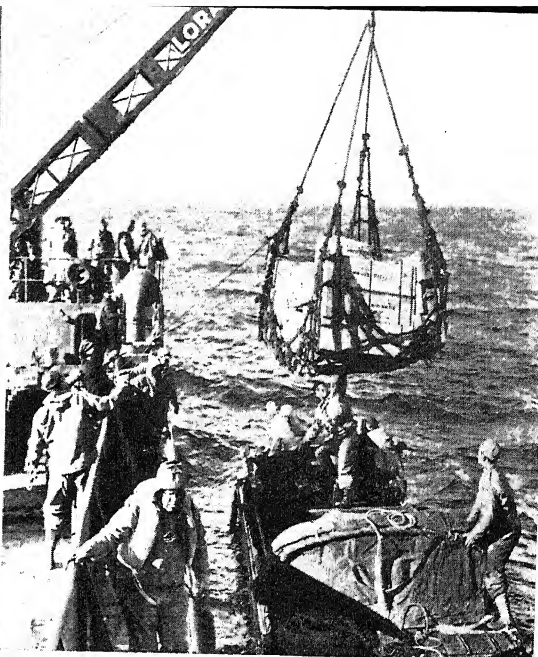
The Division of Insurance of the War Shipping



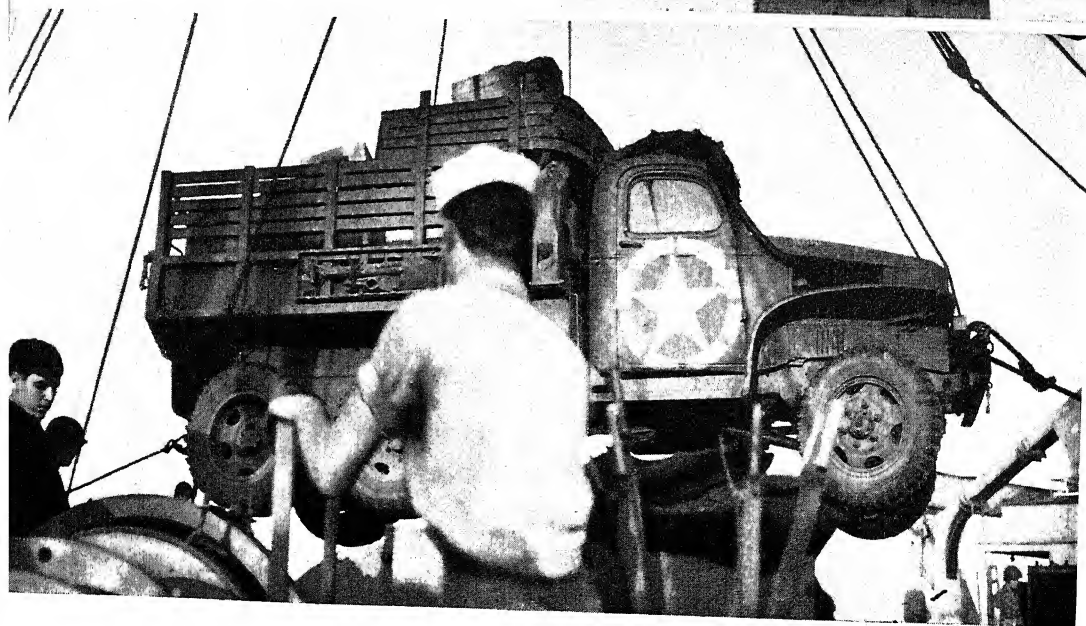
3, 4. U.S. Maritime Commission photos

SHIPBUILDING—LIBERTY MODEL AND VICTORY MODEL

1. The 296th Liberty Ship, launched from the Oregon Shipbuilding Corporation Yard as the first keel plate was lowered for the first Victory Ship, the S.S. *United Victory*. 2. Scene at the outfitting Basin, where ships are taken after being launched (Oregon Shipbuilding Corporation). 3. Artist's preview sketch of the Victory Ship, showing the finer hull lines of the new model. Mass production was under way in the fall with deliveries expected in the summer of 1944. Speed will be 15 knots or more as compared with 11 for the older Liberty Ship, shown below (4).



Above: Materials crammed on an LST headed for Cape Gloucester (U.S. Coast Guard Photo). Right top: Ammunition transferred to an amphibious truck (U.S. War Department). Right: U.S. soldiers rolling supplies ashore during the invasion of Makin (U.S. Coast Guard Photo). Below: An Army truck swinging overside to a waiting landing barge (U.S. Coast Guard Photo).



Administration issued Revision 2, to General Bulletin 10, which covered additional regulations for war risk insurance on lives of merchant seamen. The revision provides insurance in excess of that provided by ship owners. On March 2, 1943, the Senate passed the shipping omnibus bill, that gives insurance coverage for vessels in which the United States has an interest, and raises expenses and commissions allowed insurance carriers reinsuring with the War Shipping Administration.

In March, 1943, the War Shipping Administration announced the publication in the Federal Register of General Order 6, Revised, which incorporates the original General Order 6 and its nine supplements in a single document and gathers together for the first time the current rules and insurance regulations of the Division of Wartime Insurance for the underwriting of war risk insurance on cargo, hull, crew, fishermen, and freight interests. The new General order also contains important new material. Concurrently with the publication of this General Order, two new rate schedules were announced covering shipments of cargo.

In respect to the special risk or facultative cargo war risk insurance policy, provision has been made for automatic attachment of insurance at an intermediate port of call of the vessel if the insurance premium is not paid until after the sailing of the vessel from the port of loading; also, provision is made to incorporate in the policy the standard of commercial practice called for by the law under which such insurance is written.

To the open cargo war risk insurance (Warship-opencargo Policy), a "Black List Warranty" has been added and a provision inserted in the policy incorporating the standard of commercial practice called for by the law authorizing the writing of such insurance. The definition of "imports" is so changed that insurance covering a shipment of cargo bound for United States ports remains valid and continues to cover if, after attachment of the risk, the destination of the vessel is changed to a port outside the United States.

The regulations now also provide for a new form of Individual War Risk Life Insurance Policy covering seamen, enabling seamen to purchase additional insurance in excess of the policies furnished by the War Shipping Administration to crews of its vessels. This policy in general follows the pattern of the "Second Seamen's War Risk Policy," modified to reflect the fact that premiums are paid by the seamen. The procedure for procuring such insurance has been modified so that seamen may make application for the insurance through the operator of the vessel, captain of the vessel, or a shipping commissioner.

The War Shipping Administration also announced publication of its Cargo Rate Schedules C-16 and C-17. The former, covering exports from the United States, embodied certain reductions for long voyages. The latter schedule, which became effective Apr. 1, 1943, excludes from noncompensatory rates a substantial number of commodities with respect to which this form of subsidy will no longer be available. Such commodities will, however, continue to be accepted for insurance at the higher rates named in the schedule and are not excluded from coverage under the Open Cargo War Risk Policy.

Labor and Training. It is estimated that the employment of men and women in United States shipyards will reach at least 1,500,000 by Jan. 1, 1944. This number is remarkable, when it is considered that five years ago, only about 100,000 were employed. Many activities such as light welding, run-

ning machine tools, and painting, are now done by women. In fact, a yard located at Portland, Ore. has 30 per cent women employees, a percentage nearly reaching the average British level of 35. Equally rapid increases of personnel have been necessary in the loading and operating of ships. In industries that have grown as rapidly as shipbuilding and shipping, disputes frequently arise between members of the same and other trades, and also with the management.

To prevent disputes and work stoppages, meetings of a labor and government agency viz., Shipbuilding Stabilization Committee of the War Production Board, were held in March, 1943. The Committee was made up of, six members of the Metal Trades Union (A.F.L.), six from the Industrial Union of Marine and Shipbuilding Workers (C.I.O.), twelve management representatives, and seven from Federal agencies including War Department, Navy Department, Maritime Commission, and War Production Board, a representative of the Board being chairman. The Committee established sub-committees to handle matters relating to absenteeism, grievances, annual wage review, and workers productivity.

The War Shipping Administration and the Maritime trade unions completed in December, 1943, 18 months of wartime operations together. The collective bargaining agreements between operators and unions will continue for the duration of the war, not only on the ships which were under the operators on the declaration of war, but on ships built since. The Statements of Policy guarantee that the system of hiring remains as in the bargaining agreements. Officers and men must be procured by the general agents upon the terms and conditions prevailing in the services in which the vessels are to be operated. Thus all agents of vessels holding contracts with Maritime unions will procure their men through hiring halls.

The Maritime Commission has played an important part in centralizing requests for deferment of active merchant seamen, and in keeping local draft boards informed of the employment status of seamen for which draft deferment has been obtained. Deferment has been requested by the Maritime Commission for merchant seamen between the ages of 18 and 38; the Commission has been able to prevent the arrest or induction of many seamen who had been earlier classified as delinquent by the local draft boards.

Besides the training schools previously established by the Maritime Commission (see 1943 YEAR BOOK) many shipyards organized classes for men and women, where welding, plan reading, and other subjects were taught. Yards also offered employees prizes of Victory bonds or cash for suggestions on increasing ship production. The Maritime Commission awarded flags and buttons to yards and workers having outstanding records in building ships. Captains, engineers, and crew were given bonuses on voyages to some ports in danger zones, and when their ships were exceptionally well handled.

See BUSINESS REVIEW under *Armament Production*; DEFENSE TRANSPORTATION, OFFICE OF; LEND-LEASE PROGRAM; NETHERLANDS EAST INDIES under *History*; REFRIGERATION AND AIR CONDITIONING.

CHAS. H. HUGHES.

SHIPPING LOSSES. See NAVAL PROGRESS under *Naval Losses* and *Submarine Warfare*; SHIPPING under *Marine Losses*; JAPAN and NORWAY under *History*.

SHIP RADIO STATIONS. See **COMMUNICATIONS** under *Radio*.

SHIPSHAW PROJECT. See **CANADA** under *History*.

SHOCK THERAPY. See **PSYCHIATRY**.

SHOE INDUSTRY. See **HIDES, LEATHER, AND SHOES**.

SHOOTING. America's crack marksmen saw plenty of action in 1943, but their targets were more important than those one usually associates with the sport of shooting. The shortage of ammunition for home-front consumers considerably reduced competition on our rifle, trap, and skeet layouts, but the Grand American championships were held at Vandalia, Ohio, with a number of new title winners emerging from the forty-fourth annual contests. The richest prize of all, that for the Grand American Handicap, was captured by Jasper Rogers of Dayton. The 35-year-old toolmaker won the blue ribbon event in a shoot-off with five rivals. Each man broke 97 out of 100 targets in the regular contest at 18 yards then Rogers shattered 47 of the extra 50 to win.

Miss Skipper Winski, 17-year-old high school girl of Wellsburg, W.Va., led the women with a score of 97 out of 100 at 17 yards. Herschel Cheek, police chief of Clinton, Ind., was the all-around winner, and Rudy Etchen, Chicagoan, repeated in the national doubles. The Great Eastern, high spot of skeet shooting for the last 14 years, was canceled.

THOMAS V. HANEY.

SHORTAGES. See **LIVING COSTS; UNITED STATES** under *The Domestic Front*, and articles on foreign countries, for a general discussion. See also articles on products and industries, as **AGRICULTURE; BUILDING MATERIALS; CHEMISTRY; COAL; COPPER; LIQUOR INDUSTRY; MOTOR VEHICLES**. For **Labor Shortages**, see topics listed under *Manpower*.

SHORTLAND ISLAND. See **BRITISH SOLOMON ISLANDS**.

SHORT STORIES. See **LITERATURE**.

SIAM. See **THAILAND**.

SIERRA LEONE. A British West African colony (256 sq. mi.) and protectorate (27,669, sq. mi. including those parts of the colony treated as protectorate). Total area, 27,925 square miles. Population (1931 census), 1,768,480, including 96,422 in the colony. In 1940 the total population was estimated at 2,000,000, including 121,100 in the colony. Free-town, the capital (80,000 inhabitants in 1940), has one of the best harbors in West Africa and is an important naval base. Education (1941): 255 schools and average attendance of 15,136.

Production and Trade. Kola nuts, palm oil and kernels, ginger, rice, groundnuts, piassava, cassava, hides, diamonds, gold, iron ore, platinum, and chromite are the chief products. Trade (1941): imports £3,814,391 (£2,502,631 in 1940); exports £1,592,608 (£2,147,816). The chief exports were palm kernels, iron ore, gold, chrome ore, ginger, and piassava. Coal, petroleum, tobacco, textiles, apparel, hardware, and provisions were the main imports. Roads (1940): 998 miles. Railways (1942): 311 miles.

Government. Finance (1942): revenue £1,500,000; expenditure £1,300,000. Net public debt, Dec. 31, 1941, £1,288,259. The colony and protectorate are administered by a governor, assisted by an executive council. There is a legislative council of 23 members (including the Governor as president) which legislates for both the colony and the protectorate. Governor and Commander in Chief, Sir Hubert Stevenson (app. July 5, 1941).

SIGNAL CORPS, U.S. Army. See **MILITARY PROGRESS**; also, **COMMUNICATIONS; ILLUMINATION**.

SIGNALING DEVICES. See **ILLUMINATION**.

SILICA GEL. See **CHEMISTRY** under *New Materials*.

SILK. See **WAR PRODUCTION BOARD** under *Salvage*.

SILVER. In addition to playing its usual role as a political bone of contention, silver in 1943 played an important part in the war program. Early estimates that 139 million oz. would be required for essential industrial uses in 1943 turned out to be about 39 million oz. too high. Less essential uses, such as jewelry and silverware, were held to approximately 30 million oz. Although the use of silver for aircraft engine bearings is of great importance and is increasing, original estimates that 25 to 35 million oz. would be required for this use during the year proved to be excessive.

Production estimates were more accurate. Early predictions—that about 40 million oz. of domestic silver would be produced during the year and that 20 million oz. of silver would be imported in the form of ore and base bullion for refining in this country for the last half of 1943—approximated actual figures. The U.S. Bureau of Mines' estimates for the continental United States and Alaska placed 1943 production at 41,373,000 oz., compared with 1942 production of 55,859,658 oz.

As in 1942, when it produced 14,644,890 oz., Idaho was the leading silver producing State. A severe labor shortage reduced its total production, which averaged approximately one million oz. per month. Utah replaced Montana as the second largest producer, although Montana was a close third. Both States produced less than in 1942 when Montana's production was 11,188,118 oz. and Utah's 10,574,955 oz. Arizona, in fourth place, also failed to reach its 1942 total of 7,064,467 oz. Other producing states were Colorado, Nevada, California, Washington, New Mexico, Texas, and minute amounts came from Oregon, South Dakota, and Wyoming. Alaska, because of severe curtailment of gold mining operations, produced only about 40 per cent of its 1942 total of 119,704 oz.

Handy and Harman, silver brokers, estimated that Canada produced 18,500,000 oz. in 1943; Mexico, 87,000,000 oz.; and Peru, 16,000,000 oz.

Because of virtual cessation of gold mining activities by War Production Board order L-208, domestic mining of silver occurred almost entirely because of its presence in base metal ores. Idaho production came principally from lead-zinc mines with the exception of the famous Sunshine Mining Co. and the Coeur d'Alene Mines Corp., where it was produced in conjunction with antimony. Utah's production came from mines producing zinc and lead. Montana and Arizona silver was a by-product of copper mines. Operations of Desert Silver, Inc., at Nivloc, Nev., one of the few mines which produced silver almost exclusively, were shut down in mid-year.

The effort to make available to industry "free silver" from the U.S. Treasury were finally successful in July, 1943, when the Green silver act became law. Halted in December, 1942, by a filibuster by Senator Pat McCarran of Nevada, who objected to the proposed sale price of 50 cents an oz., the bill was revised to carry a sale price of 71.11 cents an oz., and in this form it was passed. By subsequent War Production Board order, silver sold by the Treasury for consumption by industry may only be used for war purposes. Only silver will be sold which does not represent backing for currency, although Congress agreed

to let silver used for nonconsumptive industrial purposes, such as electrical bus bars and transformer windings, be used for monetary backing. By December, about 25 million oz. had been authorized for consumption by essential industry under the Green act. It has been proposed to allow the Treasury Department to repurchase surplus inventories of Treasury silver remaining in the hands of industry at the close of the war.

Silver requirements for coinage in the Middle East, India, and elsewhere, due to increased war activities and the presence of large numbers of troops, has increased tremendously. During the first eleven months of 1943, the United States lend-leased 40,897,000 oz.

Greatly increased use of silver alloys for brazing, which made possible a swift, continuous, cheap method of joining metals sufficiently flexible for large-scale or short-run production, consumed large quantities. In September, the WPB prohibited further use of foreign silver for this purpose, making it necessary to use the more expensive domestic product. Throughout the year, use of silver was regulated by WPB order M-199.

CHARLES T. POST.

SIMPLIFICATION OF DESIGNS. See WAR PRODUCTION BOARD; also, LIVING COSTS; SHIPBUILDING.

SINARQUISTAS. See MEXICO under *History*.

SINGAPORE. See BRITISH MALAYA.

SINKIANG. See CHINA under *History*.

SIRUP. See SUGAR.

SKATING. Miss Gretchen Merrill, 17-year-old Boston Skating Club star, won the highest award in figure skating when she placed first in the women's senior event at the 1943 national championships held in Madison Square Garden, New York. Miss Dorothy Goos, the junior queen of 1942, was runner-up. Arthur (Buddy) Vaughn, Jr., of the Philadelphia S.C. took the men's senior contest and Miss Doris V. Schulbach and Walter Noffke of the Springfield, Mass., Ice Birds defended their senior pairs title. Other champions were Edward Le Maire, New York, junior men; Miss Hildegard Balmain, New York, junior women, and Miss Marcella May and James Lothead, Jr., of San Francisco, senior dance team.

More sparkling than the amateur championships were the professional shows, Sonja Henie's Hollywood Revue, Ice Follies, and Ice Capades, that played to near-capacity crowds on their tours from coast to coast.

Miss Carmelita Landry of Fitchburg, Mass., and Dick Werner of Paterson, N.J., proved the big stars in speed skating. Attractive Miss Landry won the Middle Atlantic and New York State outdoor titles and Werner duplicated her feat in addition to winning the Eastern States meet. Miss Helen Carlesco of Jackson Heights, L.I., was the Eastern States women's champion.

THOMAS V. HANEY.

SKIING. There was plenty of snow in 1943, but little skiing, with most of our top-flight competitors in the service and wartime travel restrictions keeping thousands away from winter playgrounds.

Intercollegiate skiing just about filled the competitive picture. New Hampshire's team won the Lake Placid Club's twenty-second annual games, replaced Dartmouth as Intercollegiate Ski Union champion, and placed first in the Middlebury Carnival. The I.S.U. title games were run off in conjunction with Dartmouth's thirty-four annual contests. Capt. Mo Distin of the Hanoverians took

the college downhill and cross-country laurels as well as the downhill and combined jump and langlauf at Middlebury. Artie Devlin placed first in the Roosevelt Trophy jump held at Bear Mountain State Park.

Miss Rhona Wurtele of Westmount, Quebec, captured the slalom and combined honors in the international races between Canadian and Eastern United States women at Lake Placid. The downhill race was won by Miss Paula Kann, 21-year-old North Conway, N.H., star.

THOMAS V. HANEY.

SKYTRAIN, SKYTROOPER. See AERONAUTICS under *American Transports*.

SLOAN FOUNDATION. See PHILANTHROPY under *Foundation Activities*.

SLOVAKIA. A former province of the Czechoslovak republic, proclaimed an independent republic by the provincial parliament on Mar. 14, 1939, and taken under German protection by a treaty signed Mar. 18, 1939. Capital, Bratislava.

Area, Population, etc. Exclusive of territories ceded to Hungary and including areas transferred to the republic by Germany from Poland, Slovakia has an area of 14,848 square miles. The population at the census of Dec. 15, 1940, was 2,654,000, excluding German armed forces in Slovakia and 85,000 Slovak workers then employed in Germany. Some 2,000,000 of the inhabitants were Slovaks. German, Jewish, Hungarian, and Ruthenian (Ukrainian) minorities formed the remainder of the population. Bratislava, the chief city, had a population of 170,668 in 1935. The live birth rate in 1941 was 24.1 per 1,000 inhabitants; death rate, 14.7.

Production. Agriculture and forestry are the chief occupations. Industry, mining, and commerce are of secondary importance. Estimated production of the chief crops in 1941 was (in metric tons): Wheat, 315,500; barley, 265,000; rye, 200,000; oats, 208,500 in 1940; corn, 84,000; potatoes, 1,667,600; beet sugar, 57,400 in 1940-41; linseed, 1,100; hempseed, 1,800; flax fiber, 1,700. Wool output in 1940 was 400 metric tons. Mineral production in 1941 was reported by the Slovak press as follows (in metric tons): Iron ore, 978,000; coal, 816,300; manganese ore, 82,000; antimony ore, 19,400; copper ore, 122,400; precious metals, 105,000; salt, 10,000; petroleum, 24,000 in 1940.

Foreign Trade, etc. Merchandise imports in 1941 were valued at 3,491,000,000 Slovak crowns (2,872,000,000 in 1940); exports, 3,182,000,000 crowns (3,175,000,000 in 1940). (One Slovak crown equaled 0.0860 reichsmarks or \$0.0344 at the official exchange rate.) Germany supplied 1941 imports to the value of 1,496,000,000 crowns (Bohemia and Moravia, 1,087,000,000) and purchased exports valued at 918,000,000 crowns (Bohemia and Moravia, 1,357,000,000).

Budget estimates for 1942 placed total receipts at 2,187,000,000 crowns; expenditures, 3,247,000,000 crowns. The cumulative budget deficit for the years 1940-42 inclusive was about 2,863,200,000 crowns. Railways in 1940 extended 1,580 miles. Military roads constructed by the Germans during 1939-42 considerably extended the inadequate highway network.

Government. The Slovak People's party, led by Josef Tiso, a Roman Catholic priest, adopted fascism of the Nazi variety as its ruling principle and imposed it upon Slovakia when the province obtained regional autonomy within the Czechoslovak republic in November, 1938 (see 1938 YEAR BOOK,

p. 201). Following the declaration of independence and the acceptance of German protection, a new constitution making Slovakia an authoritarian "Christian National Republic" was adopted by the one-party parliament on June 21, 1939. The Constitution provided for a parliament of 80 members elected by the people for five years from a one-party list; a President elected by Parliament; and a National Council of 22 members exercising wide executive and legislative powers through its chairman, acting as Premier.

The National Council was composed of 6 representatives appointed by the President, 10 of the Slovak People's party, and 6 of the corporative civil service, labor, and commerce organizations. President in 1943, Josef Tiso (elected Oct. 26, 1939); Premier, Bela Tuka. The Constitution recognized the Slovak National, or Hlinka, party (successor to the Slovak People's party) as the sole legal political party.

Under the Slovak-German treaty of Mar. 18, 1939, Slovakia agreed to permit German military occupation of its frontier districts along the Polish border, to "organize its own military forces in close collaboration with the German armed force," and to "conduct its policy in close collaboration with the German Government." A German-Slovak military agreement ratified Aug. 18, 1939, placed the Slovak military forces under German command and authorized German military occupation of the entire country (see *YEAR BOOK* for 1939, p. 182 f.). Slovak forces joined in the German invasion of Poland on Sept. 1, 1939, and in the German attack upon the Soviet Union beginning June 22, 1941. The Slovak puppet Government adhered to the German-Italian-Japanese military alliance on Nov. 24, 1940, and signed the Anti-Comintern Pact on Nov. 25, 1941 (see *AXIS POWERS*). It declared war upon the United States in December, 1941. For 1943 developments, see below.

History. The position of Pres. Josef Tiso's Nazi-fied puppet government deteriorated rapidly during 1943 as the prospect of German victory faded. The regime was narrowly based upon the pro-German Slovaks affiliated with the Hlinka party and upon Nazi elements among the German minority in Slovakia. When the conviction spread that Hitler had lost the war, opposition groups became more open in their defiance.

The anti-Nazi agitation among the Slovaks took the form of guerrilla warfare in some isolated districts, discontent and occasional mutinies among troops mobilized for service on the Russian front, and mounting criticism of the Tiso regime and its collaboration with Berlin. On August 27 a group of Slovak leaders in Bratislava were reported to have written Tiso demanding the repudiation of his pro-German foreign policy, withdrawal of Slovak troops from Russia, dismissal of the pro-Nazi Premier, Bela Tuka, restoration of political democracy, and the closest possible collaboration with the Czechs.

Nazi organs repeatedly complained of the growing influence of President Eduard Benes and the Czechoslovak Government in exile in London (see *CZECHOSLOVAKIA* under *History*). In a pastoral letter read in all Catholic churches on March 21, seven bishops of the Roman Catholic Church vigorously protested oppressive governmental decrees "affecting great masses of our fellow-believers as well as our countrymen . . ." They urged "that civil rights and protection be afforded by the State to all citizens regardless of their race and nationality" and that baptized Jews be accorded all Christian rights.

The United Nations Information Office in New York revealed in April that notwithstanding Tiso's status as a Roman Catholic priest, many of the Slovak clergy had been thrown into concentration camps, that all monastic orders had been dissolved and their property confiscated, and that other extensive Church holdings had been seized by the Germans. The Slovak Lutheran Church likewise protested against the Nazi principles and activities of the Government and its dependent organizations. An unsatisfactory reply led the Lutherans to institute a boycott of the Hlinka organizations.

There was mounting tension between anti-Nazi Slovaks and the German minority led by Franz Karmasin, who because of his support in Berlin was called the real dictator of Slovakia. Karmasin complained that the morale of many Germans as well as Slovaks had been undermined by "enemy propaganda." But despite all opposition, the Slovak Nazis and the Germans proceeded with their Berlin-inspired program for the Nazification of Slovakia. On February 8 Sano Mach, the strongly pro-German Interior Minister of the puppet government, declared that 20,000 Jews, all that remained of the 90,000 Jews originally living in Slovakia, would be deported to Eastern Poland within the next few months whether or not they had been baptized as Christians. A June report of the Czechoslovak Press Bureau stated that only 5,000 unbaptized and 11,000 baptized Jews were still in Slovakia. Meanwhile German economic penetration continued apace through the acquisition of Jewish properties and other measures.

SLOVENIA. See *YUGOSLAVIA*.

SLUM CLEARANCE. See *NATIONAL HOUSING AGENCY*.
SMALL BUSINESS SECTION. See *ANTITRUST DIVISION*.

SMALLER WAR PLANTS CORPORATION. An emergency war agency of the U.S. Government, which reports through the War Production Board; created by act of Congress on June 11, 1942, with a capital stock of \$150,000,000, for the most effective utilization of small business concerns in the war effort. Management is vested in a board of five directors appointed by the chairman of the WPB. The Corporation is empowered to make loans to small business concerns, to purchase or lease land, plants, equipment, or supplies for sale or lease to small concerns, and to enter into procurement contracts with the U.S. Government. On Mar. 18, 1943, the WPB Smaller War Plants Division was transferred to the Smaller War Plants Corporation. Chairman: Albert M. Carter, Acting.

SMITHSONIAN INSTITUTION. An organization founded in 1846 according to the terms of the will of James Smithson of England, who in 1826 bequeathed his entire estate to the United States of America "to found at Washington, under the name of the Smithsonian Institution, an establishment for the increase and diffusion of knowledge among men." The "increase of knowledge" is accomplished through scientific research and exploration.

The usual program of explorations has been curtailed, owing to wartime conditions, and the few field expeditions that were carried on in 1943 were concerned in the main with the war or with commitments dating back to the prewar period. The policy of the Institution has been to use all its resources to aid in winning the war, while continuing insofar as possible the recording and publishing of essential scientific observations and such curatorial work as is necessary for the proper care of the National collections. All re-

search projects not necessary for the orderly resumption of cultural activities after the war have been suspended for the duration with one exception, namely, those activities related to a closer cultural cooperation with the other American republics.

The Institution's major contribution to the war effort has consisted in furnishing urgently needed and often hard to get information regarding obscure peoples and places to the Army, Navy, and war agencies. More than a thousand recorded inquiries had been answered up to the close of the fiscal year. The Institution joined with the American Council of Learned Societies, the Social Science Research Council, and the National Research Council in sponsoring the Ethnogeographic Board, a non-governmental agency whose function is to act as a clearinghouse between the above institutions and other scientific and educational organizations throughout the country, and the Army, Navy, and war agencies within the Government. The Smithsonian War Committee, appointed in 1942, has met regularly to consider plans to increase the Smithsonian's contribution to the war effort, and upon its recommendation, a number of wartime projects have been carried out. A number of research and consultation projects connected with war problems have come to the Institution through the Ethnogeographic Board and the War Committee, as well as through contacts of various officials of the Smithsonian.

In the field of inter-American cooperation, the Handbook of the Indians of South America has been brought practically to completion; the first part of a "Checklist of the Coleopterous Insects of Mexico, Central America, the West Indies, and South America," a long-needed tool for entomologists, prepared under the direction of Dr. R. E. Blackwelder, is being printed; and an Inter-American Society of Geography and Anthropology has been organized, with membership open to scientists anywhere in the hemisphere, and with more than 700 members already enrolled from nearly all countries and both continents.

The "diffusion of knowledge" is carried on by publication of the results of scientific researches and exploration. During the war, however, publication has been restricted largely to material that relates to the war or is of value in strengthening cultural relations with the American nations to the south of us. A new series entitled "Smithsonian War Background Studies" was begun in the summer of 1942 for the purpose of making available authentic information on the less well-known areas and peoples involved in the war. There have been issued 17 papers in this series.

During the year 188 publications were issued, and 194,057 copies were distributed to libraries, educational institutions, and individuals. Outstanding among these were "Compendium and Description of the West Indies," by Antonio Vázquez de Espinosa, translated by Charles Upson Clark, a detailed itinerary of Spanish America written by a Carmelite missionary in 1628 or 1629; "Fishes of the Phoenix and Samoan Islands Collected in 1939, during the Expedition of the U.S.S. *Bushnell*," by Leonard P. Schultz, curator of the division of fishes of the National Museum, who accompanied the expedition; and "The Native Tribes of Eastern Bolivia and Western Matto Grosso," by Alfred Métraux. The Smithsonian Meteorological Tables and the Smithsonian Mathematical Tables were also reprinted to supply the increased demand for these tables, in large part from war agencies.

The Smithsonian administers the following bureaus which are supported by Congressional appropriations: The United States National Museum, National Collection of Fine Arts, Bureau of American Ethnology, International Exchange Service, National Zoological Park, and Astrophysical Observatory including the Division of Radiation and Organisms. It also administers the Freer Gallery of Art. The National Gallery of Art was established as a bureau of the Institution but is administered by the Board of Trustees of the Gallery (See ART.).

The expendable income of the Institution for 1943, consisting of income from investments, income from miscellaneous sources, and gifts for special objects (excluding income from the Freer endowment) was approximately \$273,000. Its endowment fund (exclusive of the Freer endowment) amounted to \$2,642,923. The Secretary is Charles G. Abbot, D.Sc.; the Assistant Secretary, Alexander Wetmore, Ph.D.

SMOKELESS POWDER. See CHEMISTRY under *Explosives*.

SMUGGLING. See NARCOTIC DRUGS CONTROL.

SOAP. See BUSINESS REVIEW; CHEMISTRY under *Soap*.

SOAPSTONE. See TALC.

SOCIAL INSURANCE. See NEW ZEALAND, under *History*; POSTWAR PLANNING; SOCIAL SECURITY BOARD.

SOCIALISM. The year 1943 saw some progress by socialist parties, notably in Canada, but it brought forth no organized socialist movement as a factor in the struggle for a socialist peace. On the contrary that "revolution," preferably "by consent," which Harold Laski had once argued was a necessity for victory, no longer could be presented in any such aspect. Obviously the Big Four were winning without it, and their conduct in Africa, Italy, and Europe, and their promises or lack of promises for Asia, made it increasingly doubtful how much socialist revolution of any sort any of them, even Stalin, might desire or permit. The masses themselves were still too much repressed under the weight of war to give a clear indication of their stand. Nevertheless, the vigor of socialist revival in Italy after the fall of Mussolini and the persistent courage of socialist elements in the underground movement in Europe gave proof of the vitality of the socialist idea. There was no revival of a formal socialist internationalism and the rest of the story can best be told under the headings of different nations.

In the United States 1943 was an off year in politics. Jasper McLevy was, as usual, reelected Mayor of Bridgeport, Conn. His Connecticut Socialist Party remained unaffiliated with the national organization. In Reading, Pa., the socialists elected their candidate, J. Henry Stump, who had formerly been Mayor of the city. They also voted in favor of reaffiliation with the national organization, with which they had cooperated in elections. The Party nationally indicated its intention of making every effort to run a Presidential campaign in 1944 despite the greatly increased difficulties of getting any minor party on the ballot in many States. Its issues would be a peoples' peace and socialist reconstruction. It reiterated the desire to help in the organization of some such mass party as the Canadian Cooperative Federation.

In Canada the C.C.F. made astonishing gains with a socialist program strongly backed by both

the farmers and labor but not controlled by the bloc voting of a few powerful labor unions as in the British Labor Party. In provincial elections in Ontario it became the second party, increasing its representatives in the legislature from 0 to 34. It increased its representation in the federal Parliament by capturing two seats in by-elections.

Elsewhere in the western hemisphere there were no important socialist developments. In Argentina, both before and after the Ramirez coup d'état, Socialists were very active in agitating for the restoration of civil liberties and parliamentary democracy. In Chile Socialists continued in the coalition cabinet. Their advocacy of an emergency measure imposing drastic controls on private capital in the fall of the year led to a fight within the Democratic Alliance but it was still preserved.

On the European continent the only parliamentary elections were held in Switzerland, where the Social Democratic Party won 56 seats out of the total of 194 in the National Council (parliament), becoming the largest single party. This success led it to revive its campaign for membership in the Federal Council of seven in which it was still unrepresented.

In occupied Denmark the Social Democratic Party stiffened its resistance to Nazi demands and ordered all its members absolutely to boycott public meetings arranged by pro-Nazis or anti-democrats. Socialists were active in all phases of the opposition to Nazi rule which followed the German declaration of martial law in Denmark.

In Sweden the Government, predominantly Social Democratic, while it continued its policy of neutrality, felt itself able sharply to strengthen its resistance to German demands. Thus, it welcomed thousands of refugees from Denmark and other occupied lands, vigorously protested specific Nazi outrages against the peoples of Norway and Denmark, and refused longer to permit the Germans to send war materials and furloughed soldiers to Norway via Sweden. A Committee to revise the Social Democratic platform of 1920 concluded its work during the fall and made plans for submitting the proposed platform to the Party Congress in May, 1944.

In Finland the Social Democratic Party remained the largest single party with 85 out of 200 Parliamentary seats. It also held 4 seats in the coalition cabinet. In February, 1943, President Risto Ryti, following his reelection, asked the socialist leader, Viano Hakkila, to form a cabinet. Since he was unsuccessful in obtaining the co-operation of the Agrarians he declined the Premiership, but Socialists accepted representation in the Cabinet. In the fall, the Social Democratic Finance Minister, Viano A. Tanner, urged "an honorable permanent peace" with the U.S.S.R. (See FINLAND.)

In general, in the occupied countries Socialists cooperated with the underground movements and continued their representation in such governments-in-exile as offered it to them. Cooperation with Communists was greatly hindered not only in Europe but throughout the world by Stalin's announcement early in the year of the summary execution, late in 1942, of the outstanding socialist and labor leaders, the Polish Jews, Victor Alter and Herman Ehrlich, on the monstrous charge that these flaming anti-Nazis had connived with Nazi forces.

French Socialists were represented at the Provisional Consultative Assembly meeting in November in Algiers by five members of the last French Parliament and three representatives of

the reconstituted French Socialist Party. As this is written there is no definite word of the fate, in Germany, of Leon Blum and other prominent Socialists held prisoners by the Germans. They are probably still alive. We have already referred to socialist activity in Italy, where Socialists are making common cause with other democratic groups in demanding the complete abdication of the House of Savoy.

In the British Commonwealth of Nations, socialist parties scored successes not only in Canada but in New Zealand and Australia. In New Zealand in September, 1943, the Labor Party Government under Prime Minister Peter Fraser, and Vice-Premier Walter Nash, was returned to power in the first federal election in five years, but by a reduced majority. It still held a clear majority of 44 representatives against a combined opposition of 37. It refused to include in the Cabinet members of the opposition on the ground that the country had approved its own program rather than that of its Nationalist opponents. This program included advocacy of expanded government housing and more radical social security plans than that Party had formerly advanced. New Zealand Communists, while critical of the Labor Party, decided to support it in the elections. Mr. J. E. Lee, who had been expelled by the Labor Party, formed a new group called the Democratic Labor Party, which failed to elect any candidate. After the elections the War Cabinet approved a 10-year plan for increased development of the national hydroelectric organization. In November the Party representatives urged the Government to push a program for the greater socialization of industry, vacations with pay for all workers, "equal pay for equal work," and the establishment of a minimum family income.

In Australia the Labor Party in August won a great electoral victory. Not only did it increase its representation in Parliament by 13 votes, thus establishing a clear majority, but also it won a majority in the new Senate which will take office in July, 1944. John Curtin remains Prime Minister and he interpreted the results of the election as a mandate for a wholly labor government rather than a coalition government, for which his opponents asked. There were no striking developments in new social legislation, but the Government, through a ministry of postwar reconstruction, established in December, 1942, appointed various commissions to draw up plans for reconstruction in industrial and rural areas. A meager dispatch dated December 18 reported that the triennial conference of the Labor Party had unanimously approved a charter "that marks a complete break with Labor's long-standing tendency toward isolationism and exclusionism."

The British Labor Party continued on its course without any important change. At the official Party Conference in June, 1943, the majority voted to continue the electoral truce with the Conservative and Liberal Parties; it urged support of the Beveridge Plan, and again rejected the application of the Communist Party for affiliation, thus distinguishing between that Party and the Russian masses for whom there is a very strong feeling of friendship among British workers. The Conference resolution on the treatment of Germany, a compromise declaration, pointed more than former declarations or the later declaration of the Trade Union Conference in the direction of "Vansittartism," that is, the responsibility of the whole German people rather than the Nazi Party for the war. George Ridley, Editor of the *Railway*

Service Journal, was elected Chairman of the Party, and Arthur Greenwood, acting leader of the Parliamentary Labor Party, was elected Treasurer over Herbert Morrison, Home Secretary in Churchill's Cabinet. Much later in the year Mr. Morrison suffered a defeat in the Party when the Party Executive Committee dissociated itself from his action in releasing the British Fascist leader, Sir Oswald Mosley, from long detention in jail, on the score of health. It should be remembered that Sir Oswald had never been indicted and was held under a drastic emergency act permitting the Government to detain individuals without benefit of habeas corpus.

The Trade Union Congress at its fall meeting, under Socialist leadership, demanded a minimum of four decencies: a decent job, a decent home, a decent social security scheme, and a decent educational opportunity for all British children.

In general the British Labor Party continued to adopt good resolutions, and its leaders to make good speeches, about the future. In the opinion of this writer it has, however, thus far failed to rise to its opportunity as trustee for the unorganized democratic socialist sentiment of the world. It has made no vigorous fight in the Cabinet, Parliament, or the country against a continuing British imperialism. It made a weak fight for the Beveridge Plan. These things plus the electoral truce probably explain the growing popularity, at least temporarily, of the new Common Wealth Party led by Sir Richard T. D. Acland, which is pushing vigorously, although on non-Marxist lines, a more comprehensive socialist program than the official Labor Party urges. The small Independent Labor Party which is definitely to the left of the Labor Party also continues to have an influence beyond its Parliamentary strength.

See CHILE, GERMANY, GREAT BRITAIN, NEW ZEALAND, SWITZERLAND, under *History*.

NORMAN THOMAS.

SOCIAL PROTECTION COMMITTEE AND DIVISION. See **FEDERAL SECURITY AGENCY**.

SOCIAL PSYCHOLOGY. See **PSYCHOLOGY**.

SOCIAL SECURITY BOARD (SSB). The Social Security Act, which provided for the establishment of the Social Security Board, was passed in 1935 and amended during 1939. Its principal purpose is to relieve the misfortunes that come when earnings are cut off by lack of work, old age, blindness, or death; and when children are deprived of parental support or care. The Social Security Board has direct administrative responsibility for the Federal old-age and survivors insurance system, and cooperates in the administration of the Federal-State employment security and public assistance programs.

The Federal old-age and survivors insurance system provides monthly insurance payments for workers and their families when the wage earner is 65 years old or over and stops work or when he dies. A lump-sum payment may be made if an insured worker dies and leaves no dependents entitled to monthly benefit payments for the month in which he died. The amount of the payments is based on the worker's own wages from jobs covered by the system and is paid as a right, regardless of what other resources he may have. The cost is shared by workers and their employers, who pay special taxes which go into a fund in the U.S. Treasury, out of which benefits are paid.

During the calendar year 1943, over \$155,000,000 was certified for payments of monthly bene-

fits and \$17,830,000 was certified for lump-sum death payments. The number of individuals receiving monthly benefits as of Dec. 31, 1943, was nearly 748,000 with a monthly benefit rate of nearly \$13,510,000. Of the total number of beneficiaries, 306,000 were retired wage earners, 92,000 were wives aged 65 or over, 229,000 were children under age 18, 70,000 were widows having children under 18 in their care; the remainder were parents and aged widows of deceased workers, principally the latter.

About 75,000,000 individual workers' accounts have been set up by the Social Security Board. Many persons who had not previously worked in jobs which would make them eligible for benefits under this insurance system are now acquiring rights to such benefits as a result of increased industrial employment due to the war.

It is estimated that at least a half million older insured workers are staying on the job instead of claiming their retirement benefits. Many widows with young children have had their survivors benefits suspended because they are in covered employment. Most of the workers who do retire are not able to work any longer. But even among the old people now on insurance rolls, about 62,000 are not drawing benefits because they have gone back to jobs covered by the system. Probably many others are working on farms or in other noncovered jobs which they can fill while receiving insurance benefits.

An estimated total of 64,000,000 employees were engaged in employment covered by old-age and survivors insurance during 1943. Almost 2,500,000 employers reported wages for their employees under this system during the year. At the end of the year there were 438 social security field offices in central towns and cities throughout the country to serve workers and their employers in all matters pertaining to old-age and survivors insurance.

Old-age and survivors insurance is financed by contributions from employers and employees. The contribution rate in 1943 was 1 per cent of wages, up to \$3,000 a year, for employees and 1 per cent of pay rolls (including only the first \$3,000 paid to any employee) for employers.

At the end of 1943, assets of the old-age and survivors insurance trust fund totaled \$4,820,458,000, of which \$304,166,000 represented interest on investments held by the fund. Total payments since benefits first became payable through Dec. 31, 1943, amounted to \$445,278,000.

The Federal-State unemployment insurance program protects industrial and commercial wage earners against total loss of income when they are thrown out of work. These State systems, in cooperation with the U.S. Employment Service of the War Manpower Commission (q.v.), do two things: When an insured worker loses his job, every effort is made to help him get another; but if no job is found within a short time, he receives weekly benefits (usually about half his normal wage) for a limited number of weeks depending on his previous employment record.

Unemployment benefits are financed by contributions from employers who are subject to the State unemployment compensation laws. The contributions are a percentage of wages paid (exclusive of wages in excess of \$3,000 paid by an employer during one year to one employee). In addition, four States require employee contributions.

Despite the fact that 1943 was a year of peak employment in the United States, some workers were laid off from both war and nonwar jobs and were able to get unemployment benefits while they

were unemployed. Unemployment payments in the calendar year 1943 amounted to \$80,128,000 or 77 per cent less than in the preceding year. From 1936, when only Wisconsin's program was in operation, through the end of 1943, more than \$2,000,000,000 has been paid to unemployed workers.

The most important function of the program now is to build reserves against the day when demobilization of our armed forces and our war workers may result in the temporary unemployment of millions while industry reconverts to peacetime production. During this postwar readjustment period, unemployment payments will be available to many of the workers now in war industries and in military service who will be seeking peacetime employment and for whom industry will not be able to provide enough jobs immediately.

As of Dec. 31, 1943, about 45,000,000 employees had wage credits under State systems. The Federal unemployment trust fund held \$5,146,745,000 to the credit of the States. Credits to State accounts during the year amounted to \$4,711,112,000, representing State deposits of contributions collected and interest earned on obligations held by the fund.

The Federal-State public assistance program enables the States, with the aid of Federal funds, to give monthly cash allowances to needy old people,

blind persons who are in need, and to children who lack parental support or care because of a parent's death, continued absence from home, or physical or mental incapacity. Monthly payments were made in December, 1943, to 2,149,000 needy old people, 59,400 blind persons, and 672,800 children in 270,800 families. Average payments were \$26.65 for old-age assistance, \$27.64 for aid to the blind, and \$41.65 per family for aid to dependent children.

In 1943, total payments to recipients from Federal, State, and local funds amounted to \$817,791,000 including \$651,915,000 to the aged, \$25,124,000 to the blind, and \$140,752,000 to dependent children. By September, 1938, all States, Alaska, Hawaii, and the District of Columbia, had approved plans for aid to the needy aged. By December, 1943, all States except Nevada and Alaska had approved plans for aid to dependent children, and all except Delaware, Missouri, Pennsylvania, Nevada, and Alaska, for aid to the blind.

War Emergency Aid Programs. The Social Security Board, through its Bureaus of Old-Age and Survivors Insurance and Public Assistance, also administers certain temporary programs designed to aid civilians who are injured or in need following an enemy attack or action to meet such attack or the danger thereof, and their dependents if disability or death results, or if they are reported as missing.

STATE AND LOCAL RELIEF EXPENDITURES, FISCAL YEAR 1943 ^a
[non-Federal program]

State	Total	State funds		Local funds	
		Amount	%	Amount	%
United States ^b	\$137,441,000	\$66,595,000	48.5	\$70,846,000	51.5
Alabama.....	267,000	132,000	49.5	135,000	50.5
Arizona.....	681,000	681,000	100.0	.....	.....
Arkansas ^c	305,000	305,000	100.0	.....	.....
California.....	5,476,000	.....	.....	5,476,000	100.0
Colorado.....	1,482,000	1,169,000	78.9	313,000	21.1
Connecticut.....	1,396,000	508,000 ^d	36.4	888,000 ^d	63.6
Delaware.....	112,000	56,000 ^d	50.0	56,000 ^d	50.0
District of Columbia.....	359,000	359,000	100.0	.....	.....
Florida.....	532,000 ^d	.....	.....	532,000	100.0
Georgia.....	429,000	.....	.....	429,000	100.0
Idaho.....	247,000	1,000	.3	246,000	99.7
Illinois.....	18,091,000	10,900,000 ^d	60.7	7,101,000 ^d	39.3
Indiana.....	1,272,000	.....	.....	1,272,000	100.0
Iowa.....	1,977,000	89,000	4.5	1,888,000	95.5
Kansas.....	1,474,000	451,000	30.6	1,023,000	69.4
Kentucky.....	419,000 ^d	.....	.....	419,000	100.0
Louisiana.....	850,000 ^d	669,000	78.8	181,000	21.2
Maine.....	1,007,000	342,000	34.0	665,000	66.0
Maryland.....	1,589,000	792,000	49.9	797,000	50.1
Massachusetts.....	6,774,000	1,903,000	28.1	4,871,000	71.9
Michigan.....	5,497,000	2,972,000	54.1	2,525,000	45.9
Minnesota.....	3,012,000	1,800,000	59.8	1,212,000	40.2
Mississippi.....	34,000	.....	.....	34,000	100.0
Missouri.....	2,042,000 ^d	1,993,000	97.6	49,000	2.4
Montana.....	345,000	115,000	33.4	230,000	66.6
Nebraska.....	520,000	.....	.....	520,000	100.0
Nevada.....	67,000	1,000	.8	66,000	99.2
New Hampshire.....	687,000	.....	.....	687,000	100.0
New Jersey.....	3,313,000	1,458,000 ^d	44.0	1,855,000 ^d	56.0
New Mexico.....	214,000 ^d	209,000	97.7	5,000	2.3
New York.....	50,357,000	21,547,000	42.8	28,810,000	57.2
North Carolina.....	312,000	.....	.....	312,000	100.0
North Dakota.....	287,000	171,000	59.5	116,000	40.5
Ohio.....	5,610,000	4,219,000	75.2	1,391,000	24.8
Oklahoma.....	446,000	174,000	39.1	272,000	60.9
Oregon.....	962,000	683,000	71.0	279,000	29.0
Pennsylvania.....	8,904,000	8,904,000	100.0	.....	.....
Rhode Island.....	1,144,000	793,000	69.3	351,000	30.7
South Carolina.....	238,000	119,000	50.0	119,000	50.0
South Dakota.....	319,000	.....	.....	319,000	100.0
Tennessee.....	168,000 ^d	.....	.....	168,000	100.0
Texas.....	716,000 ^d	.....	.....	716,000	100.0
Utah.....	693,000	589,000	85.0	104,000	15.0
Vermont.....	291,000	.....	.....	291,000	100.0
Virginia.....	529,000	268,000	50.7	261,000	49.3
Washington.....	1,645,000	844,000	51.3	801,000	48.7
West Virginia.....	1,221,000	891,000	73.0	330,000	27.0
Wisconsin.....	2,981,000	297,000	10.0	2,684,000	90.0
Wyoming.....	146,000	99,000	67.9	47,000	32.1

^a Percentage distribution based on unrounded data. Year ended June 30, 1943. ^b Totals are sums of unrounded figures; therefore may differ slightly from sums of rounded figures. ^c Data on payments from local funds not available. ^d Estimated. ^e Data on payments from local funds incomplete.

THREE TYPES OF PUBLIC ASSISTANCE UNDER STATE PLANS APPROVED BY THE SOCIAL SECURITY BOARD

State or Territory	Old-age assistance	Number of recipients for June, 1943 ^a Aid to the blind	Families	Children	Average payment to recipients for June, 1943 ^a Old-age assistance	Aid to the blind	Dependent children ^b (<i>av. per family</i>)	Total	Obligations incurred for payments ^b in the States for fiscal 1943 ^c Old-age assistance	Dependent children ^b in the States for fiscal 1943 ^c	Aid to the blind
Total.....	2,169,947	53,714	301,438	740,131	\$24.68	\$25.99	\$38.94	\$786,992.148	\$621,098,866	\$149,479,930	\$10,413,843
Ala.....	22,952	647	4,616	12,781	10.57	11.30	19.07	3,735,708	2,600,938	1,052,909	81,870
Alaska.....	1,476	..	..	..	37.48	..	..	550,675	550,675	..	..
Ariz.....	6,624	..	1,696	4,786	37.48	35.43	36.31	5,178,749	4,197,865	811,846	169,038
Ark.....	26,042	1,192	5,523	14,179	14.59	16.07	22.18	3,793,289	3,793,289	1,356,619	198,899
Calif.....	151,922	6,678	8,333	20,526	37.60	47.04	64.29	79,306,820 ^e	68,225,192	7,181,628	3,908,362
Colo.....	41,376	597	4,147	10,760	36.15	34.49	33.63	21,445,448	19,304,361 ^d	1,887,383	253,704
Conn.....	16,632	149	1,937	4,898	30.65	20.83	62.76	7,552,310	6,022,087	1,468,715	61,608
Del.....	1,893	284	..	574	13.35	13.35	42.31	404,898	332,199	162,699	..
D.C.....	3,145	278	816	2,455	27.81	34.30	37.11	1,658,306	1,094,223	446,276	117,907
Fla.....	41,046	2,484	3,350	7,705	14.62	15.57	26.30	9,140,359	7,387,068	1,750,154	483,137
Ga.....	70,118	2,191	4,336	10,467	9.83	12.77	23.08	9,402,473	7,816,972	1,585,407	317,004
Hawaii.....	1,508	78	606	1,933	17.04	20.78	48.14	6,644,473	3,809,894	3,074,489	17,090
Idaho.....	9,801	245	2,011	5,406	26.95	28.01	35.88	4,204,327	3,109,438	1,068,900	80,589
Ill.....	147,074	..	26,606	60,532	28.98	32.23	32.23	69,432,358	49,073,937	9,758,711	770,635
Ind.....	65,008	10,325	10,325	22,434	23.56	22.16	32.78	12,735,701	17,155,781	4,806,275	..
Iowa.....	53,944	1,488	4,767	11,784	25.44	27.33	41.54	11,865,078	8,881,671	2,589,498	518,061
Kans.....	29,951	1,212	1,212	3,558	14.58	16.57	33.95	7,108,206	6,924,825	108,141	75,240
Ky.....	51,339	1,104	1,104	3,885	19.72	23.74	33.11	12,092,866	7,060,170	4,028,567	334,129
La.....	37,433	1,450	1,083	4,692	22.60	23.63	47.35	5,382,392	4,175,892	925,092	281,908
Me.....	15,742	963	1,663	4,692	21.52	24.61	34.50	5,603,276	3,666,978	1,779,574	156,724
Mass.....	14,037	512	3,659	10,292	35.10	26.32	65.35	42,315,230	34,630,701	7,464,655	319,874
Mich.....	82,401	995	8,616	21,497	27.21	32.05	37.72	35,066,999	24,492,509	10,109,746	464,744
Minn.....	37,983	1,312	15,124	35,767	27.21	32.05	37.72	20,889,744	17,193,115	3,340,104	356,525
Miss.....	60,490	1,004	6,788	16,567	25.50	30.90	37.33	3,601,366	2,826,424	605,122	169,320
Mo.....	24,941	1,301	2,469	6,370	9.15	10.71	31.64	28,837,913	23,900,634	4,937,279	..
Mont.....	108,708	..	12,251	29,084	20.30	26.71	32.65	4,393,084	3,466,439	826,168	97,477
Neb.....	11,965	318	1,831	4,805	25.10	23.08	32.25	8,950,489	7,104,407	1,662,288	183,794
Nev.....	27,777	649	3,711	8,522	33.13	..	..	801,694	801,694	..	..
N.H.....	2,040	..	786	1,948	24.90	25.25	51.82	2,641,682	2,046,342	501,557	93,783
N.J.....	6,549	697	5,375	12,436	25.00	26.74	32.05	10,846,403	8,032,859	2,605,093	208,451
N.M.....	26,739	927	5,275	12,436	29.53	28.80	39.99	2,340,272	1,280,318	981,006	68,858
N.Y.....	112,607	2,640	19,237	40,942	30.24	31.90	62.65	56,582,206	40,060,617	15,541,394	980,195
N.C.....	37,082	2,108	7,951	18,789	10.55	15.59	18.29	7,116,087	4,821,812	1,885,692	408,583
N.D.....	9,076	2,063	2,007	5,572	24.24	24.50	37.57	3,157,096	2,222,075	898,662	36,359
Ohio.....	134,321	3,548	15,500	28,272	27.39	23.27	45.85	49,753,617	43,533,144	5,217,164	1,003,309
Okl.....	77,279	2,058	15,678	30,620	22.47	23.07	23.07	25,398,585	20,988,743	4,701,504	1,003,309
Oreg.....	19,576	398	1,840	3,318	28.15	35.15	60.93	7,445,094	6,265,875	1,018,912	160,807
Pa.....	90,163	..	29,732	70,556	27.85	26.79	53.33	49,768,476	28,597,480	21,170,996	..
R.I.....	7,267	97	726	1,406	26.79	26.35	60.84	3,059,271	2,918,255	813,635	27,381
S.C.....	20,998	812	3,029	8,100	17.40	17.60	30.91	3,518,692	2,633,243	781,987	103,462
S.D.....	14,004	244	1,400	4,058	21.97	11.80	20.94	4,156,777	3,464,510	643,464	48,803
Tenn.....	39,050	1,593	12,832	22,519	14.24	12.96	20.65	9,596,102	6,077,844	3,286,066	252,192
Tex.....	182,154	4,423	11,846	26,582	20.31	22.08	21.30	43,400,301	43,400,301	1,189,910	1,100,892
Utah.....	122	1,780	2,063	6,435	38.01	22.88	51.77	4,760,360	4,760,360	1,442,418	5,583
Vt.....	5,432	122	645	1,669	18.72	22.92	33.18	1,470,845	1,171,989	265,726	42,730
Va.....	17,854	1,011	4,185	11,758	16.97	14.05	22.01	3,739,443	2,403,971	1,108,403	167,760
Wash.....	61,924	808	3,328	8,045	34.38	30.68	66.88	28,594,230	25,061,856	2,454,063	388,317
W.Va.....	19,459	874	8,730	24,394	16.20	21.07	29.78	8,907,776	4,670,602	4,077,710	230,204
Wis.....	50,495	1,728	8,034	19,304	25.45	25.45	44.50	20,679,154	16,550,545	4,804,537	538,072
Wyo.....	3,411	122	489	1,280	31.17	34.76	33.57	1,436,541	1,144,588	246,016	45,987

^a Figures from 8th Annual Report of the Social Security Board, 1943. ^b From Federal, State, and local funds; excludes cost of administration, hospitalization, and burials, and beginning with September, 1940, of medical care. ^c Includes aid-to-the-blind program administered without Federal participation. ^d Includes data for recipients 60 but under 65 years of age. ^e Year ended June 30, 1943. / Aid to dependent children.

(For details concerning these programs, see the 1943 YEAR BOOK.)

Civilians, including enemy aliens, in the United States, Alaska, Hawaii, Puerto Rico, and the Virgin Islands receive aid under special allocations of funds to provide money payments, loans (with or without interest or security), and assistance in kind and medical or other services necessary for the protection of health, safety, or welfare. Persons to whom aid is available include:

(1) Civilian defense workers, who are injured as a result of enemy attack or of action to meet such attack or the danger thereof, or who are injured while in the performance of their duties; or

(2) Dependents of individuals injured or killed under circumstances described in (1), or interned by the enemy, or reported as missing under circumstances indicating such death or internment; or

(3) Persons who are being or have been evacuated from any area under the direction of civil or military authority; or

(4) Persons who are otherwise in need as a result of enemy attack or of action to meet such attack or the danger thereof.

In December, 1942, a large group of workers

hitherto covered by the temporary programs were transferred to the jurisdiction of the U.S. Employees' Compensation Commission. The act effectuating this transfer applies to employees of contractors with the United States and provides that compensation shall be paid or credited to such employees who are partially or totally disabled because of an injury proximately resulting from a war-risk hazard or who are missing or captured, and to the widow, child, and—if dependent—the widower, parent, brother, sister, grandparent, and grandchild of such persons who die as a result of these injuries. (See also WAR RELOCATION AUTHORITY.)

For details concerning operation of old-age and survivors insurance, unemployment compensation, and public assistance, see the 1941 YEAR BOOK. For statistics by States see tables on pages 576-578.

See CHILDREN'S BUREAU; INTERNATIONAL LABOR OFFICE; POSTWAR PLANNING; RAILWAYS; SILVER; STATE LEGISLATION under *Social*. For parallel developments in other countries, see AUSTRALIA, CANADA, GREAT BRITAIN, NEW ZEALAND, and URUGUAY under *History*.

ARTHUR J. ALTMAYER.

UNEMPLOYMENT BENEFIT PAYMENTS AND FUNDS AVAILABLE FOR BENEFITS

[Data corrected to Aug. 20, 1943]

State or territory	Benefits paid during June, 1943 ^a	Workers receiving benefits in June	Benefits paid during fiscal year ended June 30, 1943 ^a	Total benefits paid since first payable, through June 30, 1943 ^b	Total available for benefits, June 30, 1943 ^c	Collections and interest cumulative through June 30, 1943	Collections
Total.....	\$5,954,800 ^d	100,256	\$176,872,432 ^e	\$2,085,735,680	\$4,008,346,000	\$6,201,757,000	\$5,935,833,000
Ala.....	100,440	2,123	2,716,483	24,642,763	41,893,000	66,507,000	63,931,000
Alaska.....	1,030	19	34,973	1,334,983	3,663,000	5,002,000	4,823,000
Ariz.....	4,157	71	139,619	6,112,958	10,189,000	16,638,000	16,102,000
Ark.....	19,545	494	543,007	8,154,733	16,928,000	26,153,000	25,129,000
Calif.....	646,781	9,758	13,684,727	221,429,407	363,916,000	593,116,000	569,780,000
Colo.....	30,639	336	268,320	10,771,140	21,902,000	34,189,000	32,602,000
Conn.....	44,089	640	1,700,971	28,693,004	105,462,000	134,920,000	128,784,000
Del.....	14,638	384	209,601	2,682,064	11,663,000	14,787,000	13,892,000
D.C.....	33,809	520	642,445	8,711,769	36,898,000	46,387,000	43,713,000
Fla.....	49,698	1,015	2,366,102	20,568,177	25,689,000	47,730,000	45,970,000
Ga.....	74,140	1,789	2,380,749	15,857,562	45,537,000	64,809,000	61,612,000
Hawaii.....	4,917	48	57,324	901,193	12,988,000	13,986,000	13,137,000
Idaho.....	6,980	148	163,256	6,987,057	7,916,000	15,282,000	14,817,000
Ill.....	1,011,140	15,399	24,323,213	133,493,712	350,097,000	497,324,000	471,700,000
Ind.....	186,730	3,373	3,967,479	53,204,948	104,945,000	161,339,000	154,460,000
Iowa.....	38,151	825	765,529	16,796,499	34,456,000	53,350,000	50,924,000
Kans.....	73,774	1,360	752,996	8,401,008	29,254,000	40,353,000	38,390,000
Ky.....	73,238	1,888	1,361,121	15,276,603	58,421,000	76,413,000	72,183,000
La.....	78,319	1,579	2,481,112	29,756,076	36,759,000	67,670,000	65,142,000
Me.....	40,976	1,143	742,457	14,037,337	18,817,000	33,093,000	32,252,000
Md.....	87,267	1,419	1,980,115	31,871,222	69,105,000	102,141,000	98,690,000
Mass.....	172,064	3,294	5,898,817	108,219,413	154,438,000	264,948,000	253,110,000
Mich.....	168,597	2,431	10,036,710	162,994,796	173,104,000	338,715,000	327,353,000
Minn.....	88,734	1,619	2,207,522	39,342,788	43,940,000	85,777,000	82,528,000
Miss.....	22,316	446	597,894	8,611,679	12,074,000	21,325,000	20,628,000
Mo.....	151,862	2,693	4,695,772	27,989,058	99,500,000	132,341,000	124,680,000
Mont.....	5,114	103	185,961	7,778,735	10,021,000	18,275,000	18,217,000
Nebr.....	13,706	257	284,407	5,579,900	15,015,000	22,255,000	21,044,000
Nev.....	2,214	39	54,142	3,052,637	5,276,000	8,682,000	8,445,000
N.H.....	33,238	731	431,979	8,623,309	14,114,000	23,368,000	22,400,000
N.J.....	380,734	5,678	10,055,780	67,154,241	265,692,000	337,106,000	319,411,000
N.M.....	1,787	43	86,010	3,754,878	5,595,000	9,858,000	9,450,000
N.Y.....	1,047,276	16,336	50,305,885	411,737,314	501,004,000	919,549,000	887,473,000
N.C.....	43,211	1,473	1,574,608	24,151,154	60,497,000	86,227,000	82,714,000
N.D.....	811	22	71,069	2,076,657	3,253,000	5,900,000	5,611,000
Ohio.....	86,652	1,575	5,034,755	75,878,596	302,001,000	386,316,000	363,739,000
Okl.....	45,263	732	1,085,063	13,801,030	29,652,000	44,445,000	42,081,000
Oreg.....	17,298 ^d	311	481,549 ^e	18,567,809	34,739,000	53,988,000	52,239,000
Pa.....	372,153	5,499	8,481,075	211,656,844	393,833,000	612,066,000	590,610,000
R.I.....	147,689	2,088	2,716,308	31,890,137	40,930,000	72,962,000	70,781,000
S.C.....	29,050	686	940,219	9,099,200	24,363,000	34,147,000	32,438,000
S.D.....	3,295	88	54,930	1,349,916	4,801,000	6,550,000	6,140,000
Tenn.....	107,240	3,311	3,313,564	28,507,752	38,301,000	68,322,000	66,060,000
Tex.....	45,652	1,019	1,518,689	40,160,527	96,876,000	141,265,000	133,953,000
Utah.....	4,183	58	197,257	8,341,596	12,968,000	21,835,000	21,180,000
Vt.....	7,794	165	153,954	3,155,136	7,385,000	10,864,000	10,385,000
Va.....	122,231	2,798	1,614,395	22,186,150	42,228,000	66,834,000	63,977,000
Wash.....	14,503	313	483,943	23,846,897	68,835,000	94,539,000	90,886,000
W.Va.....	93,421	1,273	1,430,558	25,903,667	44,033,000	70,883,000	68,289,000
Wis.....	45,852	837	1,570,799	27,251,682	92,577,000	121,747,000	113,542,000
Wyo.....	482	7	27,219	3,387,462	4,803,000	8,779,000	8,436,000

^a Not adjusted for voided benefit checks. ^b Adjusted for voided benefit checks. ^c Represents sum of balances at end of month in State clearing account and benefit payment account, and in State unemployment trust fund account maintained in the United States Treasury. ^d Includes \$5,276 resulting from review of 1938-41 seasonal claims in Oregon. ^e Includes \$135,609 resulting from review of 1938-41 seasonal claims in Oregon. ^f Average weekly number of workers receiving benefits in June.

SOCIAL STUDIES, SOCIAL WELFARE. See *EDUCATION*; *JUVENILE DELINQUENCY*; *PHILANTHROPY*; *POSTWAR PLANNING*; *ROCKEFELLER FOUNDATION*; *STATE LEGISLATION under Social*; articles on *SOCIAL SECURITY BOARD* and other government agencies; *AUSTRALIA* and other countries under *History*.

SOCIETIES AND ASSOCIATIONS. The following is a list of some of the leading national and international organizations, with a concise report of their activities during 1943. The organizations are listed alphabetically according to the first specific word in each title. Certain classifications have been omitted in this list because they are presented elsewhere in this volume. The reader is, therefore, referred to the following articles as a supplement: for accrediting associations, to the article on *UNIVERSITIES AND COLLEGES*; for labor organizations, to *LABOR CONDITIONS*; for religious bodies, to *RELIGIOUS ORGANIZATIONS*, to the separate articles on churches, as well as to interdenominational groups listed below; for sport organizations, to articles on various sports and *Amateur Athletic Union*, below; for foundations, trusts, etc., to *PHILANTHROPY* and the articles there referred to. For government agencies, learned academies, and institutes, see separate articles. For official international organizations, see *PAN AMERICANISM*; *UNITED NATIONS*, as well as various separate articles.

Actors' Fund of America, founded in 1882 to care for the impoverished, aged, and infirm members of the theatrical profession. Membership (1942): 2,183. President: Walter Vincent. Secretary: Robert Campbell. Headquarters: 1619 Broadway, New York City. The Fund, supported by donations, benefit performances, and a limited endowment, spends from \$140,000 to \$180,000 a year. A home for retired actors is maintained in Englewood, N.J.

Adult Education, American Association for, founded in 1926 to serve as a clearing house for information, initiate activities, and assist enterprises already in operation, and to aid and advise individuals who, although occupied with some vocation or interest, desire to continue their education. Membership: 2,200. President: Austin H. McCormick. Director: Morse A. Cartwright. Headquarters: 525 West 120 Street, New York City.

Advancement of Colored People, National Association for, founded in 1909 to combat the spirit of persecution which confronts colored people in the United States, safeguard their rights, and secure for them equal opportunity with all other citizens. Membership: 225,000. President: Arthur B. Spingarn. Executive Secretary: Walter White. Headquarters: 69 Fifth Avenue, New York City. The Spingarn Medal for 1943 was awarded to Judge William H. Hastie, who in protest against discriminatory practices in the War Department in matters affecting Negroes, resigned from the post of Civilian Aide to Secretary of War Stimson. See *NEGROES*.

Advancement of Music, National Bureau for, founded in 1916 to promote musical interest and activities and to aid those interested in such activities. Membership: Anyone contributing \$5.00 or more. President: Howard Braucher. Bureau Director: C. M. Tremaine. Headquarters: 315 Fourth Avenue, New York City 10. The Bureau cooperates with existing agencies in the field of music and promotes National Music Week (beginning first Sunday in May), now expanded to National and Inter-American Music Week. Has available comprehensive list of publications on many aspects of music including school music, contests and festivals, community music, group instruction is applied music. Merged with the National Recreation Association January, 1943.

Advancement of Science, American Association for, founded in 1848, a democratic and representative organization devoted to the whole field of science. Organized in 15 sections, it has about 25,000 members and 187 associated societies. President: Dr. Isaiah Bowman. Permanent Secretary: Dr. F. R. Moulton. Headquarters: Smithsonian Institution Building, Washington, D.C. Publications: *A.A.A.S. Bulletin, Science, The Scientific Monthly*, technical symposia and nontechnical scientific books.

Advancement of Science, British Association for, founded in York, England, in 1831. President: Sir Richard Gregory. Secretary: O. J. R. Howarth. Headquarters: Burlington House, London, W. 1. The Association holds an annual meeting at which papers are read (subsequently published) and sets aside an annual sum for scientific researches. In lieu of the Annual Meetings, in war time the Association has held Conferences, arranged by its Division for the Social and International Relations of

Science, dealing with postwar problems. The first of these conferences reviewed the general subject of Science and World Order, and out of this arose arrangements for subsequent conferences on Postwar European Agriculture, Mineral Resources, and other subjects, while a number of Committees have also been appointed to deal with Postwar University Education; Land Planning, Social Sciences, etc.

Aeronautical Sciences, Institute of, founded Oct. 15, 1932, to advance the sciences applied to aeronautics through the publication of technical papers, the holding of scientific meetings, and other activities contributing to the progress of the aeronautical profession. President: Hugh L. Dryden. Secretary: Robert R. Dexter. Headquarters: 1505 RCA Building West, 30 Rockefeller Plaza, New York City. A meeting of the Institute is scheduled to take place in New York City, January 25, 26, 27, 1944.

Aeronautic Association, National, founded in 1922, a nonprofit, nonpartisan organization representing the public interest in all phases of aviation. Net paid membership: over 16,000 with over 100 chapters throughout the United States. President: Gill Robb Wilson. Ex. Vice-President: W. P. Redding. Headquarters: 1025 Connecticut Ave., N.W., Washington 6, D.C. Outstanding functions, 1943: Promotion of airports and airway facilities; aviation for public education; model building and flying for youth; development of progressive legislation; fostering of American air supremacy; representing the Federation Aeronautique Internationale in the U.S.; supervision of aircraft records and performances.

A.F.I. See under *Labor, American Federation of*.

Alcoholism, World League against, founded in 1919 to attain by means of education the total suppression of alcoholism throughout the world. Membership: 51 national temperance organizations in 31 countries. Executive Secretary: Ernest H. Cherrington. Headquarters: Westerville, Ohio. During 1943 the League continued to supply factual and source material to temperance organizations in many countries, to publishers of temperance periodicals, and to schools. It maintains at Westerville, Ohio, a large reference library on the subject of alcohol.

Allied Youth, Inc., an organization specializing in the field of alcohol education. Chairman: Homer P. Rainey. Secretary: W. Roy Breg. Headquarters: National Education Ass. Bldg., Washington, D.C. The organization publishes the monthly magazine *The Allied Youth*, and *Aids in Alcohol Education*.

Amateur Athletic Union of the United States (A.A.U.), founded in 1888 to improve and promote amateur sports and the civic interest of the nation, by the education of all classes in the benefits to be derived by participation in athletics. The A.A.U. establishes a uniform test of amateur standing and uniform rules governing the sports within its jurisdiction, regulates and awards the athletic championship of the United States, and promotes legislation in the interest of sports facilities. President: L. di Benedetto. Secretary: D. J. Ferris. Headquarters: 233 Broadway, New York City 7. For activities and awards during 1943, see the separate articles on the various sports.

American. See the key word of the title, as *Gas Association, American; Hospital Association, American; Labor, American Federation of; Theatre Wing War Service, Inc., American*.

Américan-Scandinavian Foundation, listed under *Scandinavian*.

Antiquarian Society, American, founded in 1812 with the maintenance of a national library of American history as its chief purpose. The library contains nearly 700,000 titles and is free for the use of all qualified scholars. Membership: 200. President: Samuel Eliot Morison. Director: O. S. Brigham. Librarian: C. K. Shipton. Headquarters: Worcester, Mass.

Anti-Saloon League of America, founded in 1895 to promote temperance education and legislation: a nonmembership organization. President: Bishop Ralph S. Cushman. General Superintendent: George W. Crabbe. Headquarters: 131 B Street, S.E., Washington 3, D.C.

Applied Psychology, American Association for, founded in 1937 to promote the service which psychology as a science can render society in its application in business, education, industry, law, medicine, mental hygiene, social welfare, and related fields. Membership: 700. President: A. T. Poffenberger. Executive Secretary: Alice I. Bryan. Columbia University, New York City. During 1943 the Association published, in addition to *The Journal of Consulting Psychology*, a revised edition of the first biographical directory of applied psychologists and the first in a series of *Applied Psychology Monographs*.

Archaeological Institute of America, founded in 1879 to promote and direct archaeological investigation and research. Membership: 1,300. President: William Bell Dinsmoor. General Secretary: Meriwether Stuart. Headquarters: 504 Schermerhorn Hall, Columbia University, New York City.

Architects, The American Institute of, founded in 1857 to promote the efficiency of the profession, to advance education in architecture and allied subjects, and to make the profession of increasing service to society. Membership: 4,000. President: Raymond J. Ashton. Secretary:

A. C. Robinson, III. Headquarters: The Octagon, 1741 New York Avenue, N.W., Washington 6, D.C.

Artists for Victory, Inc., a nonprofit organization founded in 1942 to provide an outlet for the technical abilities and imagination of professional painters, sculptors, architects, etc., in the prosecution of the war. Membership: about 9,000. President: Hobart Nichols. Secretary: Allyn Cox. Treasurer: Arthur Crisp. Headquarters: 101 Park Avenue, New York City. Activities during 1943 included a graphic arts competition, exhibited throughout the United States; a war poster competition; an exhibition of contemporary American art; and a Christmas card competition.

Artists, Inc., National Association of Women, listed under Women.

Artists Professional League, Inc., American, founded in 1928 to arouse for American art the regard, preference, and support of the American people; to spread dependable technical knowledge among artists; and to obtain legislation that will benefit the artist's profession and terminate piracy of designs. Since 1933 the League has sponsored the annual nation-wide celebration of American Art Week, November 1-7. Membership: about 2,000 throughout the United States and its territories. National chairman: F. Ballard Williams. National secretary: Wilford S. Conrow. Headquarters: Carnegie Hall, New York City. At the Annual Dinner, Feb. 20, 1943, the following honors were awarded: League's Medal of Honor to (1) the late Alfred D. Lenz, Master Sculptor; (2) Edward B. Edwards, Master Designer; (3) Herbert Adams, Master Sculptor; (4) Charles Dana Gibson, Master Illustrator; (5) Irving R. Wiles, Master Portrait Painter. For excellence in the 1942 American Art Week celebrations the Medal of Honor was presented to these: (1) *Sunday at Rancho de Taus*, by Nils Hogner; (2) *House at Sag Harbor*, by Clara Stroud; (3) *Mother and Child*, by Margery Ryerson; (4) *Baby's Head*, by Margery Ryerson; (5) *Rocks at Abiquin*, by John Young-Hunter.

Arts, The American Federation of, founded in 1909 to develop art and its appreciation. Chapter Membership: 487. Honorary President: Hon. Robert Woods Bliss. President: Agnes Rindge. Director: Thomas C. Parker. Headquarters: Barr Building, Washington, D.C.

Arts and Letters, National Institute of, founded in 1898 to further the interests of literature and the fine arts. Membership: 250. President: Arthur Train. Secretary: Henry S. Canby. Headquarters: 633 West 155 Street, New York City. A Gold Medal was awarded in 1943 (posthumously) to Stephen Vincent Benét for literature. Scheduled meetings: Festival given jointly with the American Academy of Arts and Letters in May, 1943, at New York City; Annual Dinner-Meeting, Dec. 15, 1943, in New York City.

Arts and Sciences, American Academy of, founded in 1780 to encourage scientific work and publication. Membership: 733 Fellows and 119 Foreign Honorary Members. President: Harlow Shapley. Corresponding Secretary: Abbott Payson Usher. Headquarters: 28 Newbury Street, Boston, Mass. During 1943 a number of grants for research work were made from funds given the Academy for that purpose. The Rumford Medals were awarded for the forty-third time. Meetings are held monthly, October through May.

Asiatic Association, American, founded in 1898 to study relations between Asiatic countries and the United States. Membership: 200. President: E. W. Frazier. Secretary: John B. Chevalier. Headquarters: India House, Hanover Square, New York City. Annual meetings are held the third Thursday in October at India House.

A.S.P.C.A., listed under Prevention.

Associated Press, founded in 1900 for the collection and dissemination of news, photographs, and features. Membership: 1,252. President: Robert McLean of the *Philadelphia Evening Bulletin*. Secretary: Lloyd Stratton. Headquarters: 50 Rockefeller Plaza, New York City. Scheduled meeting: April, 1944.

Astronomical Society, American, founded in 1899 to advance astronomy and closely related branches of science. Membership: 627. President: Harlow Shapley. Secretary: Dean B. McLaughlin, Harvard College Observatory, Cambridge, Mass. The Annie J. Cannon Prize was awarded in 1940 to Julie Vinter Hansen, astronomer at the Observatory of Copenhagen. Scheduled meetings: Nov. 5-7, 1943, Cincinnati Observatory, Cincinnati, Ohio.

Audubon Society, National, organized in 1905 to arouse public appreciation of the value of, and recognition of the need of, conservation of wildlife, soil, plants and water, and the interdependence of these natural resources. Membership: 6,500 individuals and 180 member societies with membership of 50,000 individuals; also, 1,500 non-member contributors. President: Guy Emerson. Executive Director: John H. Baker. Headquarters: 1006 Fifth Avenue, New York City. Activities during 1943 included enrollment of 200,000 children throughout the United States and Canada in 7,518 Audubon Junior Clubs in schools, camps, and youth organizations; the merger of the School Nature League with over 1,700 teacher members reaching over 35,000 students, and distributing over 25,000 nature bulletins annually; opening of the Audubon Nature Center at Greenwich, Conn.,

for teacher and other adult training at combined sanctuary, educational, and research center; initiation of Audubon Wildlife Screen Tours with five famous nature lecturers showing outstanding colored wildlife motion pictures in ten principal Midwestern cities; Audubon staff lecturers addressing 700 audiences reaching 155,000 individuals; protective warden service provided for wildlife on some 3,000,000 acres of land and water in Maine, Connecticut, New York, New Jersey, Pennsylvania, Florida, Louisiana, Texas and California; research projects were conducted or concluded in connection with the ivory-billed woodpecker, roseate spoonbill, Florida deer, and California condor.

Automobile Association, American (A.A.A.), founded in 1902 to provide a national network of service and protection for motor-club members and to work for the improvement of motoring conditions. Membership in A.A.A. Clubs: about 1,100,000. President: Thos. P. Henry. General Manager: Russell E. Singer. Headquarters: 17th Street and Pennsylvania Avenue, N.W., Washington, D.C. During 1942 and 1943 a major campaign of the organization was to impress upon public officials the vital role being played by passenger cars in wartime transport and to head off a movement that, because of the rubber shortage, would have caused 20,000,000 or so vehicles to be forced off the road. These efforts were crowned with success when the report of the Baruch Committee recommended a program of tire replenishment designed to keep all mechanically fit vehicles operating for the duration. Shortage of automobile mechanics, nationwide gasoline rationing, cooperation in the scrap rubber collection drives and intensive programs of training for civilian defense drivers, school bus drivers and army truck drivers were other major problems dealt with during the recent past. A.A.A. clubs provided new wartime services for members including information on the many new regulations affecting motorists, development of car-sharing groups, and aid in locating scarce replacement parts.

Automotive Council for War Production. See MOTOR VEHICLES.

Automobile Manufacturers Association, founded in 1913 for service to the motor industry. Membership: 29. President: Alvan Macauley. Secretary: Albert Bradley. General Manager: George Romney. Headquarters: New Center Building, Detroit 2, Mich.

Automotive Safety Foundation, see under PHILANTHROPY.

Bacteriologists, Society of American, founded in 1899 to promote the science of bacteriology and bring together American bacteriologists for demonstration and discussion of methods and consideration of subjects of common interest. Membership: about 1,800. President: Dr. Rebecca C. Lancefield, Rockefeller Institute, 66 Street and York Avenue, New York City. Secretary-Treasurer: Dr. W. O. Frazier. Headquarters: 310 Agricultural Hall, University of Wisconsin, Madison, Wisconsin. The 1943 meeting in Montreal, Quebec, Canada, was cancelled. There will be a spring meeting in 1944 in New York City.

Bankers Association, American, founded in 1875 to promote the welfare and usefulness of banks, secure uniformity of action on subjects of importance and provide opportunity for discussion thereon, and to provide educational opportunities for bank officers and employees. Membership: 14,478. President: A. L. M. Wiggins. Headquarters: 22 East 40 Street, New York City. Four new departments were established in 1940—Consumer Credit, Research in Mortgage and Real Estate Finance, Economics, and Customer Relations.

Banking, American Institute of, founded in 1900 to further the education of bankers in the theory and practice of banking and such principles of law and economics as pertain to the banking business, and to establish and maintain a recognized standard of banking education by means of official examinations and issuance of certificates of graduation. Membership: about 60,000. President: David L. Colby. Headquarters: 22 East 40 Street, New York City.

Bar Association, American, founded in 1878 to advance the science of jurisprudence, promote the administration of justice and uniformity of legislation and judicial decision, uphold the honor of the profession, encourage cordial intercourse among members of the Bar, and correlate activities of State Bar Associations. Membership: 30,000. President: Joseph N. Henderson. Executive Secretary: Olive G. Ricker. Headquarters: 1140 North Dearborn Street, Chicago, Ill. In 1943 the Award of Merit was given to the State Bar of California, the Bar Association of the District of Columbia, and the Bergen County (New Jersey) Bar Association. The American Bar Association Medal was awarded to John J. Parker, Charlotte, N.C., and the Ross Essay Prize to Lester B. Orfield, Kansas City, Mo. See LAW; PRISONS.

Better Business Bureaus, Inc., National Association of, founded in 1913 to encourage the formation of and assist in the development of Better Business Bureaus engaged in fostering truth in advertising and opposing fraud and/or unethical practices in advertising and selling. Membership: 81 associations. President: G. H. Dennison. Secretary: M. E. Ridenour. President's Office: 1921 Oliver Building, Pittsburgh, Penn.

Bible Society, American, founded in 1816 to encourage wider circulation of the Holy Scriptures without note or comment throughout the world. Membership: probably over 15,000. President: John T. Manson. General Secretaries: Dr. Eric M. North, Mr. Frank H. Mann, Mr. Rome A. Betts, Dr. F. W. Cropp. Treasurer: Rev. Gilbert Darlington. Headquarters: Park Avenue and 57th Street, New York City. Universal Bible Sunday will be observed Dec. 10, 1944. The 1944 annual meeting will be held May 11.

Bibliographical Society of America, founded in 1904 to promote bibliographical research and issue publications. Membership: 979. President: Thomas W. Streeter. Permanent Secretary: George L. McKay, 47 East 60 Street, New York City.

Birth Control Federation of America, Inc., listed under *Planned Parenthood Federation of America, Inc.*

Bituminous Coal Research, Inc. See *CHEMISTRY; HEATING AND VENTILATING.*

Blind, Inc., American Foundation for the, founded in 1921 to promote those interests of the blind which cannot be advantageously handled by local agencies. President: M. C. Migel. Executive Director: Robert B. Irwin. Headquarters: 15 West 16 Street, New York City. Activities include research, assistance and consultation service to local agencies, special services to individuals, scholarships, a reference and lending library, and manufacture of Talking Books for the blind.

Blindness, National Society for the Prevention of, listed under *Prevention.*

B'nai Brith (Sons of the Covenant), a Jewish service organization founded in 1843 to further the unity of the Jewish people and to serve humanitarian and community causes through a program that encompasses Americanism, youth welfare, education, community and social service, good will, defense of Jewish rights, and now, a far-reaching war service program. Membership: 175,000. President: Henry Monsky. Secretary: Maurice Bisgyer. Headquarters: 1003 K Street, N.W., Washington 1, D.C. With all its efforts geared to maximum war service, B'nai Brith observed its 100th anniversary during 1943 by waiving any formal observance and concentrating its efforts on mobilizing its 1,400 units for increased war services. During 1943, B'nai Brith reported 18,000 of its members in the armed forces; 118 killed or missing in action or prisoners of war; \$170,000,000 worth of war bonds sold; 1,500,000 servicemen given hospitality; 600 recreation facilities furnished for the armed forces; \$125,000 contributed to the Red Cross and other war relief agencies; 69 ships of the Navy being served with recreation material; 10,000,000 packs of cigarettes shipped abroad to men in service; 8,500,000 surgical dressings and sewn and knitted garments turned out by B'nai Brith women's Red Cross production units. The B'nai Brith Hillel Foundations expanded to 125 college campuses where Hillel service is being made available to Jewish student army and navy trainees; and the B'nai Brith Vocational Service Bureau spurred Jewish women to enter war work, directed Jewish adults into war-time industry and counseled youth on postwar career choices. B'nai Brith organized the American Jewish Conference, which aimed to unite the Jews of the United States on a common program of action in connection with Jewish postwar problems.

Board of Review of Motion Pictures, Inc., National, listed under *Review.*

Book Foundation, see *PHILANTHROPY.*

Books in Wartime, Inc., Council on, a voluntary group organized in 1942 and made up of booksellers, publishers, librarians, authors, and all others interested in the making and the use of books. Believing that books have an important part in the nation's war effort, its basic program is to distribute information and encourage reading, in cooperation with the Book Bureau of the Office of War Information. Membership: 74 book firms and organizations. Contributors: 31 firms in the allied industries. Chairman: W. W. Norton. Headquarters: 400 Madison Avenue, New York City. The Council has three radio programs, a bi-monthly motion picture short, a speaker's bureau and other committees. The Council's War Book Panel has selected the following four books as "Imperative": W. L. White's *They Were Expendable*; John Hersey's *Into the Valley*; Wendell Willkie's *One World*; and Walter Lippmann's *U.S. Foreign Policy*.

Botanical Society of America, Inc., established in 1906 as a clearing house for the botanists of America. It supports projects of general interest to botanists, provides an opportunity for the presentation and publication of research studies, and accepts and administers funds for certain purposes. The official publication is *The American Journal of Botany*. Membership: 1,365. President: W. J. Robbins. Secretary: Paul R. Burkholder, Osborn Botanical Laboratory, Yale University, New Haven, Conn.

Boys' Clubs of America, Inc., a national organization of Boys' Clubs for the development of boys physically, in vocational skills and character. Membership: 357 member organizations with over 350,000 boy members. Chairman: Herbert Hoover. President: William Edwin Hall. Executive Director: David W. Armstrong. Headquarters: 381 Fourth Avenue, New York City. During 1943 the

Boys' Clubs inaugurated the Victory Volunteers to mobilize boys for services on the home front, and the Pre-Service Training Plan to prepare older boys for service in the armed forces. It launched a program for increasing the effectiveness of Boys' Clubs in the prevention of delinquency.

Boy Scouts of America, founded in 1910 to promote the ability of boys to do things for themselves and others, to train them in Scouting, and to teach them patriotism, courage, self-reliance and kindred virtues. Membership: 1,547,763 (Nov. 30, 1943). President, Walter W. Head; Chief Scout Executive, Elbert K. Fretwell; Chief Scout, James E. West. Headquarters, 2 Park Avenue, New York City. During 1943 the entire Scout Program was geared into the War Program and Scouts made a notable contribution through war service. Outstanding in this service was the one hundred million hours contributed in food production and conservation. Scouts continued to assist the Government in a number of other important projects, including the scrap drive for metals of all sorts and serving as official Dispatch Bearers for the OWI to distribute important Government publications. A new Pre-Ranger type of training was developed, designed to teach older boys skills which they might need in the Armed Forces, to give them a variety of training in self-reliance and personal discipline, thus equipping them for service if they should be called upon for military service. The new Aviation Merit Badge pamphlet and the Air Scout Manual were issued and the Air Scout Program attracted boys so fast that it was scarcely possible to organize Squadrons rapidly enough to enroll them. The 33rd Meeting of the National Council was held in New York City in May.

British War Relief Society, Inc., The, of the United States of America, a member agency of the National War Fund, was organized in 1939 and is the largest American organization engaged solely in relief for war sufferers in Britain, Malta, Australia, New Zealand, etc. It represents an amalgamation of the original British War Relief Society with the Allied Relief Fund, the British War Relief Association of Southern California, the Anzac Relief Fund, the R.A.F. Benevolent Fund of U.S.A., Inc., the Maple Leaf Fund, American Seeds for British Soil and a number of other formerly independent agencies. The Society maintains 300 American Ambulances in Great Britain, 1,000 Mobile Canteens, many homes for bomb-shocked, homeless and ailing children, rest and recreation centers for merchant seamen, homes for refugee mothers and children, rest and medical centers for war workers; has shipped great quantities of clothing for the destitute, many tons of vegetable seeds for war gardens. In the United States it maintains 31 rest centers for British merchant seamen in principal seaport cities, as well as centers for men of the Royal Navy and the air forces. The Society has administered relief to the value of \$28,949,000.00 in both cash and kind. As a member agency of the National War Fund, it participates in a single fund raising campaign with other leading agencies engaged in domestic welfare projects and foreign relief. President: Clark H. Minor. Chairman: Samuel Salvage. Secretary: Thomas I. Parkinson, Jr. Headquarters: 745 Fifth Avenue, New York City. See *NATIONAL WAR FUND.*

Broadcasters, National Association of, founded in 1922 to promote and defend the American system of privately owned, competitively operated radio and to render every aid to those engaged in it to enable them to operate in the public interest. Membership: 566. President: Neville Miller. Secretary-Treasurer: C. E. Arney, Jr. Headquarters: 1760 N Street, N.W. Washington 6, D.C.

Broadcasting, Commercial Analysis of. See *RADIO PROGRAMS.*

Buhl Foundation, see *PHILANTHROPY.*

Bundles for America, Inc., organized in 1941 for the purpose of distributing to the armed forces of America and to their families necessities and comforts. Membership: 250,000. President: Mrs. Owen Oates Torrey. Secretary: Mrs. Orme Campbell. Treasurer: Commander Charles Hann, Jr. Headquarters: 681 Fifth Avenue, New York City. Activities during 1943 included distribution of 222,598 garments to Army and Navy families and to Merchant Marine victims of sinkings; 84,910 garments to the armed forces upon request of commanding officers; 11,762 kits to the armed forces; maintenance of six canteens.

Bundles for Britain, Inc., founded in December, 1939, to supply aid and relief to the citizens of Britain and the British Empire. President: Mrs. Robert Worth Bingham. Secretary: Miss Mary-Chase Clark. Business Manager: Mrs. Ernest V. Gent. Headquarters: 32 East 57 Street, New York City. Activities of 1943 included outfitting of Royal Navy men and British sailors who take over Lend-Lease ships with comforts and recreational articles; continued solicitation of funds and surgical articles for British hospitals; and continuation of shipments of new and secondhand clothing to the people of Great Britain. Total receipts for the period from December, 1939, to October, 1943, were \$7,063,157.

Business and Professional Women's Clubs, Inc., The National Federation of, founded in 1919 to bring about the spirit of cooperation among business and professional women of the United States and to extend their opportunities and their sense of responsibility for social and

economic conditions. Membership: about 75,000. President: Dr. Minnie L. Maffett. Executive Secretary: Louise Franklin Bache. Headquarters: 1819 Broadway, New York City. For the year beginning July, 1943, the Federation's program on winning the war and winning the peace calls upon business and professional women to concentrate on the wise utilization of women; on economic development for postwar employment; and on the development of plans for eventual and lasting peace.

Business Education, Inc., National Council, founded in March, 1934, to serve as a policy-making body for business education. Membership: 45 professional organizations of business teachers, comprising about 15,000 individuals. President: Hamden L. Forkner. Secretary: Helen Reynolds. Headquarters: Teachers College, Columbia University, New York City.

Camp Fire Girls, Inc., founded in 1911 to provide an opportunity for girls' personal development, through group experience, leisure-time activities, and cultivation of skills. Membership 321,000. President: Mrs. Quade C. Weld. Secretary and National Executive: Miss Martha F. Allen. Headquarters, 88 Lexington Avenue, New York City. Immediately after the declaration of war, Camp Fire Girls launched a far-reaching Service for Victory program designed to direct the activities of the girls into service most helpful to the war effort, while at the same time preparing for the future by helping them build fine personalities and acquire new skills. Immediately after Pearl Harbor the Camp Fire Girls launched their Service for Victory program, an application of the skills they acquire in Camp Fire to the war services needed most in their community. This five-point war service program includes the following fields: Cooperation with war and community service agencies; Home Service, the production and conservation of food, care of clothes and personal equipment, helping with home chores, taking care of younger children; Preparedness, cooperation with Civilian Defense, First Aid, health activities; Morale, recreation for family, friends, neighbors; Democracy, learning to understand and apply the principles of democracy.

Cancer, Inc., The American Society for the Control of, listed under *Control*.

Care of European Children, Inc., U.S. Committee for the, organized July 1, 1940, to coordinate the resources available in the United States for the care of child victims of the war in Europe, the program including the collection of funds, finding homes, placing children, and providing for their proper care. Honorary President: Mrs. Franklin D. Roosevelt; President: Marshall Field. Executive Director: Robert Lang. Secretary: Miss Agnes King Inglis. Headquarters: 215 Fourth Avenue, New York City. See *NATIONAL WAR FUND*.

Catholic Organizations. See *CATHOLIC CHURCH IN THE UNITED STATES*.

Catholic Welfare Conference, National. See *CATHOLIC CHURCH*.

Central Aircraft Council. See *MOTOR VEHICLES*.

Chamber of Commerce, International, founded in 1920 to provide business men and organizations with a continuing mechanism for interchange of information, joint study, consultation, and periodical conference; an organization for leadership in the field of international economic policy. Membership: National Committees in 32 countries and affiliated organizations in 18. President: J. Sigfrid Edström of Sweden. Chairman of the American Section: Elliot Wadsworth; Manager: E. L. Bacher. Headquarters: 9, Vastra Tradgardsgatan, Stockholm, Sweden. Offices of the American Section: 1615 H Street, N.W., Washington, D.C.

Chamber of Commerce, United States Junior. An organization founded in 1920 to organize young men between 21 and 35 for civic service and community building activities. Membership: 65,000. President: H. Bruce Palmer. Executive Vice President: Douglas H. Timmerman. Headquarters: The LaSalle Hotel, Chicago, Illinois. Americanism Week is observed February 12-22 annually. Local and National Distinguished Service Awards were made to outstanding young men. This year all activities of the 843 constituent local organizations of the United States Junior Chamber of Commerce have been integrated with the nation's war effort. National magazine: *Future*. The 1944 convention was scheduled to be held in Omaha, Nebraska, June 17-19.

Chamber of Commerce of the United States, established in 1912 primarily as a vehicle for the expression of national business opinion on important economic questions. Membership: 1,762 chambers of commerce and trade associations, 7,977 individuals, and 4,434 associates. President: Eric A. Johnston, General Manager and Secretary: Ralph Bradford. Headquarters: 1615 H Street, N.W., Washington, D.C. The Chamber is centering its attention mainly upon war problems. Chamber spokesmen appeared before congressional committees to present a practical business viewpoint on pending legislation. Twelve service departments are maintained covering the main divisions of business activity. Publications include the *Nation's Business*, a monthly, the *Washington Review*, weekly, special legislative bulletins, and committee reports. In its 1943 program the Chamber had three major objectives:

(1) winning the war; (2) preparing for victory; and (3) long-range policies in line with the basic purpose to work for the preservation and upbuilding of free enterprise and representative democracy. An "action" program, adopted following the meeting in April, 1943, embraced federal fiscal affairs, prices and rationing, controls, renegotiation of contracts, management-labor, social security, termination and settlement of contracts, disposal of war plants and surpluses, and world economies. Several special committees, besides the regular departmental committees, were engaged during the year in studies of important and postwar problems. See *POSTWAR PLANNING*.

Chautauqua Institution, founded in 1874 for religious and educational purposes. President: Arthur E. Bestor. Secretary: Charles E. Peirce. Headquarters: Chautauqua, N.Y. A program of music, lectures, and religious services is conducted during July and August each year.

Chemical Society, American, founded in 1876 to advance chemistry, chemical research and knowledge, and the qualifications and usefulness of chemists; incorporated under Act of Congress, 1938. Membership: 85,850. President: Per K. Frolich. Secretary: Charles L. Parsons. Headquarters: 1155 Sixteenth Street, N.W., Washington 6, D.C. The Award in Pure Chemistry to Kenneth S. Sanborn Pitzer, the Eli Lilly and Company Award to Herbert E. Carter, the Borden Award in the chemistry of milk to Earle O. Whittier. National war conferences were held at Detroit and Pittsburgh, total registration 7,256. Two Employment Clearing Houses were used by 918 employers and 760 applicants; 4,917 interviews were conducted. Three new local sections were established.

Child Labor Committee, National, founded in 1904 to promote legislation dealing with child labor and related subjects, conduct investigations, advise on administration, and maintain an information service. Membership: about 15,000. Acting General Secretary: Gertrude Folks Zimand. Headquarters: 419 Fourth Avenue, New York City 16. Activities in 1943 included studies of the use of children for emergency agricultural work and of children working outside of school hours; participation in hearings and conferences on Federal bills affecting child labor and related subjects and in conferences called by the Children's Bureau and other Federal agencies to consider problems relating to child employment and school attendance in wartime; a public information service; publication of a monthly bulletin, three pamphlets, several leaflets, magazine articles, etc.

Children's Fund of Michigan, see *PHILANTHROPY*.

China Society of America, The, founded in 1913 to promote friendly relations and a better understanding between the peoples of the United States and China. Membership: 300. President: William M. Chadbourne. Headquarters: 570 Lexington Avenue, New York City 22. In addition to distributing information on China to schools and clubs and publishing *China* magazine, the Society holds dinners and luncheons throughout the year for prominent Chinese and Americans coming to and from China.

Christian Endeavor, International Society of, formed in 1885 to further the training of young people in the Christian life, among societies and unions in about 50 evangelical denominations in the United States and Canada. Membership: approximately 2,000,000. President: Dr. Daniel A. Poling. Executive Secretary: Carroll M. Wright. Headquarters: 41 Mt. Vernon Street, Boston, Mass.

Christians and Jews, The National Conference of, founded in 1928 to promote justice, amity, understanding, and cooperation among Protestants, Catholics, and Jews in the United States. Membership, 24,000. Co-Chairmen: Arthur H. Compton, Carlton J. H. Hayes, Roger W. Straus. President: Everett R. Clinchy. National Headquarters: 381 Fourth Avenue, New York City. The Conference sponsors a program of education in churches, schools, military training centers, and all types of community organizations. It maintains Religious News Service, an objective news gathering and dispensing agency which provides news releases and feature materials for newspapers and journals.

Churches, The World Council of, established as a provisional committee after the world conferences at Oxford and Edinburgh in 1937 to unite the churches of the world on the Federal principle for cooperative service and the promotion of Christian unity. Membership: 82 denominations in 28 countries. World Chairman: The Archbishop of Canterbury. General Secretary: Dr. W. A. Visser 't Hooft, Geneva; Secretary in America: Dr. Henry Smith Leiper, New York. Headquarters: 297 Fourth Avenue, New York City; 41, Avenue de Champel, Geneva, Switzerland. The American Section meets in New York City in November.

C.I.O., listed under *Industrial Organizations, Congress for*.

Citizens National Committee, Inc. (formerly Citizens Emergency Committee on Nondefense Expenditures, Inc.), organized in July, 1941, to keep the public informed with respect to legislative proposals and administrative procedures, to assist Congress and other public officials in their effort to advance the economic welfare of the country, and to coordinate the public demand for efficient

and adequate but prudent government. Chairman: John W. Hanes. Executive Secretary: Kenneth L. Pray. Headquarters: 1409 L Street, N.W., Washington 5, D.C.

City Managers' Association, The International, founded in 1914 to aid in the improvement of local government administration and to increase the proficiency of city managers. Membership: 750. President: Frank Hanrahan. Headquarters: 1313 East 60 Street, Chicago, Ill. Publications issued in 1943 included *The Municipal Year Book, 1943*, and *Measuring Municipal Activities*. Also publishes *Public Management*, a monthly journal; issues the "Municipal Management Series"; nine practical manuals; and conducts The Institute for Training in Municipal Administration which offers correspondence courses.

Civil Engineers, American Society of. See FLOOD CONTROL; WATER SUPPLY AND PURIFICATION.

Civil Liberties Union, American, founded in 1920 to maintain the Bill of Rights for everybody, without exception. Membership: 6,000. Chairman of the National Committee: Prof. Edward A. Ross. Chairman of the Board of Directors: Rev. John Haynes Holmes. Director: Roger N. Baldwin. Headquarters: 170 Fifth Avenue, New York City. The Union continued during 1943 its intervention in court cases involving civil rights, in administrative practices and rulings, and in legislation. Publications included the yearly *Story of Civil Liberty*, the *Civil Liberties Quarterly*, and a running index of all relevant magazine articles.

Civil Service Reform League, National, founded in 1881 to improve and extend the merit system in the public service. Membership: 8,000. President: Nicholas Kelley. Executive Secretary: H. Elliot Kaplan. Headquarters: 67 West 44 Street, New York City. In 1943 the League fought political interference with appointments in federal war agencies, discouraged excessive expansion of federal agencies, and continued its assistance in recruiting for specialized public positions necessary to the war effort. Through its State Committees it continued its educational program to create public sentiment for the adoption and improvement of the merit system in states and municipalities throughout the country. It gave advisory services with respect to problems of administration, interpretation and enforcement of merit system laws and rules to public personnel agencies.

Civitan International, nonprofit association of civic service clubs now in its 24th year whose purpose is best explained by the motto, Builders of Good Citizenship. Objectives are (1) building of good citizenship and the promotion of international good will, (2) loyal support of our governments in peace and in war, (3) curbing of crime, (4) public safety and accident prevention, and (5) fostering of measures designed to eliminate communicable diseases and improve the public health. President: Wm. N. Tolleson. Secretary: J. M. Hopkins. Headquarters: 800 Farley Building, Birmingham, Ala.

Colored People, National Association for the Advancement of, listed under *Advancement*.

Commercial Analysis of Broadcasting. See RADIO PROGRAMS.

Common Council for American Unity, founded in 1918 to continue the work begun by the U.S. Committee on Public Information; it became an independent organization in 1921, and its name was changed from Foreign Language Information Service to Common Council for American Unity in 1940. The purpose of the Council is to help create unity and mutual understanding among the American people; to overcome intolerance and discrimination because of foreign birth or descent, race or nationality; and to help the foreign-born and their children to solve their special problems of adjustment. Executive Director: Read Lewis. Headquarters: 222 Fourth Avenue, New York City. Publications: *Common Ground*, a quarterly magazine.

Composers and Conductors, The National Association for American, founded in 1933 by the late Henry Hadley to advance the interest of the American composer, especially in relation to orchestral conductors, and to secure a hearing for serious works of merit. Membership: over 500. President: Sigmund Spaeth, 1650 Broadway, New York City. Headquarters: The Henry Hadley Studio, 15 West 67th St., New York City. In addition to regular meetings and concerts, the Association sponsored in 1943 all-American programs at Carnegie Chamber Music Hall, the Waldorf-Astoria and elsewhere. The Henry Hadley Fellowship in Creative Music was continued at the MacDowell Colony, Peterborough, N.H., and the Association cooperated with the leading orchestras, broadcasting stations, recording companies and publishers in the promotion of American music. Publications sponsored by the Association include a Piano Suite by Mortimer Browning (J. Fischer & Bro.), a Piano Sonata by Harold Morris (The Composers Press) and an orchestral piece, *Winter of the Blue Snow*, by Arthur Kreutz (C. C. Birchard & Co.). The Henry Hadley Memorial Library, housed in the Americana section of the Music Division of the New York Public Library, now contains a complete file of American works in the larger forms, available for examination by conductors and soloists, with a circulating library of classic scores and parts available on loan to local orchestras using one or more American compositions on

the same program. Particular attention was paid to film scores by Americans, with several previews of important motion pictures, the President of the Association serving also as Chairman of the National Advisory Council on Film Music. The Henry Hadley Medal, for outstanding services to American music, was awarded in 1943 to Deems Taylor, with citations of merit to Paul Creston, Helen Traubel, Irving Berlin, John G. Paine, Robert Shaw, Major Howard Bronson, Gail Kubik, Miklos Rosza, the Roth Quartet, Arturo Toscanini and RCA-Victor.

Composers, Inc., The League of, founded in 1923 to further the works by living composers of all nationalities, as well as to help composers by commissions for new works and general promotion of their compositions. Executive Chairman: Mrs. Arthur M. Reis. Headquarters: 113 West 57 Street, New York City. The League publishes a quarterly, *Modern Music*, and conducts a program series in New York and over the air. The League is promoting the "Composers' Theatre" in cooperation with universities and music colleges where chamber operas in English are being presented. The League has invited 17 composers to write short works based on war themes, which the Philharmonic Orchestra will broadcast over CBS. The OWI expects to send records of these works to the Outpost stations throughout the world. Further plans for the League's 21st season are being prepared now in relation to war projects.

Consumer-Retailer Council, Inc., National, founded in 1937 to enable consumers and retailers to work out together their mutual problems. Membership: American Association of University Women, American Home Economics Association, National Board of Young Women's Christian Associations, National Council of Jewish Women, American Retail Federation, National Association of Food Chains, National Better Business Bureau, Inc., National Retail Dry Goods Association. Chairman: H. W. Brightman. Managing Director: Roger Wolcott. Headquarters: 8 West 40 Street, New York City. Accomplishments of 1943 include the extension of the Council's series of leaflets devised to show consumer and retailers in local communities how they can cooperate in speeding the war effort and help solve their war-borne problems. New leaflets were on *Wartime Changes in the Canned Food Field*, *Mail and Telephone Order Buying*, *Simplified Selling or Self-Service and Self-Selection*, and *Help Kill the Black Market*. Other publications include *Informative Labeling*, *Informative Selling*, *Textile Labels Approved by the National Consumer-Retailer Council*, *Six-Point Consumer-Business Program in a Defense Economy*, *Philadelphia Victory Forum*, *State Annual Report of the National Consumer-Retailer Council, Inc.*, *Know Your Stockings*, *A Guide to Local Consumer-Retailer Group Cooperation*, and the *NORO News*, a bi-monthly bulletin. Consumer groups, educators and retailers in every state of the Union, the District of Columbia, Hawaii, and Puerto Rico used Council material during 1943.

Consumers League, National, founded in 1899 to awaken consumer responsibility for conditions under which goods are made and distributed, and through investigation, education, and legislation to promote fair labor standards; this includes state and federal minimum wage laws, child labor legislation, social security measures, limitation of hours of work for women, proper enforcement of labor laws. Membership: 15,000, including State and National Leagues. President: Josephine Roche; Chairman of the Board: Everett Moore Baker. Headquarters: 348 Engineers Bldg., Cleveland 14, Ohio.

Consumers' Research, Inc., founded as the Consumers' Club in 1927 and incorporated in 1929 to provide unbiased information and counsel on goods bought by the ultimate consumer. Number of subscribers: 60,000. President and Technical Director: F. J. Schlink. Secretary: Clark O. Willever. Headquarters: Washington, N.J.

Consumers' Union of United States, Inc., founded in 1936 as a nonprofit research agency which carries on both technical and economic studies, the results of which are published in the monthly *Consumer Reports* and the weekly *Bread and Butter*, to provide guidance for ultimate consumers. Membership: 70,000. President: Colston E. Warne. Secretary: Harold Aaron. Director: Arthur Kallet. Headquarters: 17 Union Square West, New York City. Consumers Union is checking on quality deterioration in consumer goods, and working for legislation to protect war-time consumers.

Control of Cancer, Inc., The American Society for the, founded in 1913 for the purpose of saving lives from cancer by educating the public about the facts of the disease. It does not treat patients, nor administer hospitals, clinics or laboratories. Membership: 700, composed largely of leaders in the fields of medicine and science. President: Dr. Herman O. Pitts. Secretary: Dr. O. F. Rhoads. Headquarters: 850 Madison Avenue, New York City 17. The lay educational program is conducted by the Women's Field Army, numbering 250,000 volunteer members. Highlight of its year's work is the educational and enlistment campaign conducted each April, designated as "Cancer Control Month." In September, 1942, the Women's Field Army adopted a special war service program to make a direct contribution to the war effort. This put special emphasis on health education of the general public, medical aid to local

physicians, and hospital service. A conference of Regional Directors of the Women's Field Army was held in New York in October, 1943, to select future objectives. The care of indigent patients, continuation of the war service program, efforts to have more cancer prevention clinics established throughout the nation, and enlargement of the cancer education program in schools will be emphasized during 1943-44.

Cooperative League of the USA, The, founded in 1916 as a national educational federation of consumer cooperatives devoted to the extension of the consumer cooperative owned business enterprises. Membership: 1,500,000 in 22 affiliated regional and national associations. President: Murray D. Lincoln. General Secretary: E. R. Bowen. Headquarters: 608 South Dearborn, Chicago; 726 Jackson Place, N.W., Washington, D.C.; 167 West 12 Street, New York City. The 13th Biennial Congress of The Cooperative League, reported that there were two and a half million American families who are members of consumer and purchasing cooperatives, doing a business estimated at \$700,000,000. The cooperatives are growing fast, the League declared, but war conditions have brought serious problems. At the close of 1943 more than one hundred mills, factories and oil refineries were owned by the co-ops producing goods for distributors through wholesale and retail cooperatives.

Cordage Institute. See **WAE PRODUCTION BOARD under Conservation of Materials**.

Correction, Annual Congress of. See **PRISONS**.
Cotton Manufacturers, National Association of, founded in 1854 for service to cotton mills in the northeastern section of the United States. Membership: about 450. President: Russell T. Fisher. Headquarters: 80 Federal Street, Boston, Mass. Student Honor Medals were awarded in various textile schools annually.

Cranbrook Foundation, see **PHILANTHROPY**.
Credit Men, National Association of, founded in 1896 as a nonprofit making organization of manufacturers, wholesalers, and bankers affiliated for the promotion of wholesome business by maintaining a sound credit structure. Membership: 20,000. President: Paul W. Miller. Executive Manager: Henry H. Heimann. Headquarters: One Park Avenue, New York City 16.

Credit Union National Association, Inc., founded 1934 to organize and service the credit unions in the United States and Canada. Membership: 53 Leagues serving 4,000,000 members. President: R. A. West. Managing Director: Roy F. Bergengren. Headquarters: 1342 East Washington Avenue, Madison, Wisconsin. Canadian credit unions were accepted to membership in 1940, and the Leagues include seven in Canada. The tenth annual meeting will be held in Madison, Wisconsin, May, 1944.

Cruelty to Animals, The American Society for the Prevention of, listed under **Prevention**.

Daughters of the American Revolution, National Society of, founded in 1890 for historical, educational, and patriotic purposes. Membership: about 145,000 in 2,570 chapters. President General: Mrs. William H. Pouch. Headquarters: Administration Building, 1720 D Street, N.W., Washington, D.C. The Society has adopted as its principal war project the D.A.R. War Project Fund, resulting from voluntary contributions of \$1 or more, from members, to be used to further the Blood Plasma Program and to purchase surgical and medical life saving equipment. In October, 1943, this fund totalled \$162,000, from which purchases have been made through the American Red Cross of 33 mobile blood donor units, 17 stationary blood donor centers, 8 station wagons, 2 sedans and 1 truck. During 1943, gifts totalling \$77,000 for 14 Approved Schools for foreign-born and Southern mountaineers were approved. Regular activities included instruction in the right use of leisure and respect for rights of others to 285,000 children in 7,200 Junior American Citizens Clubs, and distribution of 800,000 manuals for citizenship in 16 languages, to aid in naturalization. High school seniors from every State, winners of the Good Citizenship Contest, were given a war bond in lieu of the regular award of a trip to Washington. About 53,900 copies of the National Defense News were distributed as well as hundreds of thousands of Flag Codes and copies of other patriotic and educational literature. Through 118 clubs the Society furthered its educational endeavors in training girls in home making.

Daughters of Union Veterans of the Civil War, organized in 1885 to perpetuate the memories of our fathers and their loyalty to the Union, but the scope of activities has broadened to include, today, participation in every patriotic work, particularly establishment of scholarships for descendants of Civil War soldiers, and defense work of many kinds. Membership: 40,000. National President: Miss Ora Cox. Headquarters: 1326 18th Street, N.W., Washington, D.C. At the Annual Convention in Milwaukee, Wis., September, 1943, a check for \$3,000 for a complete disaster unit was presented to the Red Cross.

Democracy, Council for, founded in August, 1940; dedicated to the propagation of American faith in democracy and the preservation of our American institutions. Chairman of the Board: Raymond Gram Swing. President, Ernest Angell. Headquarters: 11 West 42 Street, New York City. A nonpolitical, nonpartisan group, the Council

makes use of all channels of communication to reach the public. In 1942 and 1943 major radio networks donated over \$600,000 worth of time to the Council; the principal programs were the dramatic series, "Dear Adolf," written by Stephen Vincent Benet, and "Day of Reckoning," written by top-flight American dramatists and produced by such actors as Raymond Massey, Monty Woolley, etc. Council's radio programs have won Variety Magazine's award for "outstanding patriotic service." Timely advertisements on critical home front problems have been prepared by the Council and have appeared in newspapers all over the country. A weekly service, "Speaking Freely," is used by many radio stations. The Council makes use of the conference method to bring together leaders of different groups and interests; round table meetings between industrial and labor leaders have produced measurable results. Council's attack on racial discrimination in the industrial field has developed effective policies and plans used now in industrial communities throughout America. Another major undertaking of the Council for 1943 was critical study of postwar reemployment of service men.

Democratic Action, Union for, founded May 10, 1941, to carry on a two-front fight for democracy, at home and abroad, to oppose totalitarianism in all forms, to organize American liberals to give progressive meaning to the present war against Fascism. Membership: 8,000. Chairman: Dr. Reinhold Niebuhr. Secretary: Murray Gross. Headquarters: 9 East 46 Street, New York City.

Dental Association, American, founded in 1859 for educational purposes. Membership: about 57,000. President: J. Ben Robinson. General Secretary: Harry B. Pinney. Headquarters: 222 East Superior Street, Chicago, Illinois. The 1943 meeting was held in Cincinnati, Ohio. See **DENTISTRY**.

Dietetic Association, the American, founded in 1917. Its objective is to improve the nutritional status of human beings, to bring about closer cooperation among dietitians and between dietitians and workers in allied fields, and to improve conditions and raise the standards of dietary work. Membership: 5,800. President: Nell Clausen. Executive Director: Katherine Mitchell Johnson. Headquarters: 620 N. Michigan Avenue, Chicago, Illinois.

Documentation Institute, the American, founded in 1937 for the promotion and development of documentation in scholarly and scientific fields. The Institute was organized as a nonprofit corporation, with members nominated by scholarly and scientific agencies. President: Watson Davis. Secretary: Helen M. Davis. Headquarters: Science Service Building, 1719 N Street, N.W., Washington, D.C. The annual meeting is scheduled for January 27, 1944, in Washington, D.C.

Dogs for Defense, Inc., founded in January, 1942, for the procurement of dogs for the armed forces of the United States. President: H. I. Caesar. Secretary: Mrs. Wm. H. Long, Jr. Headquarters: 22 East 60 Street, New York City 22. Since its inception the organization has delivered, without expense, thousands of dogs to the armed forces. See **DOGS**.

Eagles, Fraternal Order of, a fraternal and beneficial Order founded in 1898. Membership: 786,000. Grand Worthy President: Robert W. Hanser. Grand Secretary: John A. Abel. Headquarters: Kansas City, Missouri. The Order has 92,890 members in Military Service, with 1,230 subordinate units purchasing \$11,540,000 in War Bonds.

East and West Association, The, organized in June, 1941, and devoted to mutual knowledge and understanding between peoples of different countries. President: Pearl S. Buck. Secretary: Albert H. Walsh. Headquarters: 40 East 49 Street, New York City. During 1943 the Association issued study guides and reading lists, produced radio programs and conducted courses for teachers and librarians on the peoples of China, India, and Russia; organized China Clubs and sent a "roster of friends" to China.

Economic Association, American, founded in 1885 to encourage research, thought and discussion, and issue publications. Membership: 3,718 members; 1,245 subscribers. President: Albert B. Wolfe. Secretary-Treasurer and Editor of *Proceedings*: James Washington Bell. Headquarters: Northwestern University, Evanston, Ill. Chief papers for the annual meeting in January, 1944 (joint with the American Political Science Association), published in *Proceedings*, deal with postwar readjustments in international trade and monetary relations, public finance, business structure, labor, banking system; economic and political values, educational functions of economists and political scientists, social security, and American women. A quarterly journal, the *American Economic Review* covers a wide range of economic subjects of vital and current importance. A Directory, with annual supplements, contains a special-purpose, "who's who" account of members, together with classification by fields of subject matter and geographical location. An information booklet is also published. The Association is affiliated with the American Council of Learned Societies and the Social Science Research Council.

Economic Development, Committee for. See **POSTWAR PLANNING**.

Economic Entomologists, American Association of, founded in 1889 to promote the study and to advance the science of entomology, and to publish the *Journal of Economic Entomology*, etc. Membership: 1,558. President: P. N. Anand. Secretary: Ernest N. Cory. Headquarters: College Park, Md. The 1943 meeting was in Columbus, Ohio.

Economic Research, Inc., National Bureau of, founded in 1920 to encourage investigation, research and discovery, and the application of knowledge to the well-being of mankind; and in particular to conduct exact and impartial investigations in the field of economic, social, and industrial science. Membership: 23 members of the Board of Directors. President: N. I. Stone; Executive Director, William J. Carson. Headquarters: 1819 Broadway, New York City. Fifteen publications were issued in 1943 dealing with production and productivity, credit practices, national income, capital formation, business financing, cost behavior and price policy, economic problems, and war and reconstruction, etc.

Education. See also the societies listed under *Adult Education*, *International Education*, *Kindergarten Association*, *Progressive Education*.

Education, American Council on, a council of national educational associations, organizations having related interests, approved educational institutions. State departments of education, and city school systems; founded in 1918 as a center of cooperation and coordination in the field of education. Membership: 670 organizations and institutions. President and Executive Officer: George F. Zook. Chairman: O. C. Carmichael. Headquarters: 744 Jackson Place, N.W., Washington, D.C. Education and the national defense claimed the first interest of the Council in 1940. Special committees kept in touch with swiftly moving government procedures and to serve as a clearinghouse of information to members. High officials of the War Department, the Navy Department, the Manpower Commission, the National Resources Planning Board, members of Congress, and others were kept informed concerning educational resources, both of personnel and facilities.

Education Association, National. See *EDUCATION*.

Education Association of the United States, National (N.E.A.), founded in 1857 to advance the interests of the teaching profession, promote the welfare of children, and foster the education of all the people. Membership: 219,334. President: Mrs. Edith B. Joynes. Executive Secretary: Willard E. Givens. Headquarters: 1201 Sixteenth Street, N.W., Washington, D.C. See *EDUCATION*.

Education for Freedom. See *EDUCATION*.

Education-Recreation Council, National, a conference body of national agencies associated for the purpose of exchanging information and studying common problems, founded in 1933. Membership: 20 public and 11 private national agencies. Chairman: J. E. Sproul. Secretary: Robert Gamble. Headquarters: 315 Fourth Avenue, New York City.

Electrical Engineers, American Institute of, founded in 1884 for the advancement of the theory and practice of electrical engineering and allied subjects and maintenance of high professional standards. Membership: 20,719. President: Nevin E. Funk. National Secretary: H. H. Henline. Headquarters: 33 West 39 Street, New York City. 1944 technical meetings: New York City, Jan. 24-28; St. Louis, Mo., June 26-30; Los Angeles, Aug. 20-Sept. 1.

Elks, Benevolent and Protective Order of, a fraternal organization founded in 1868. Membership: 500,000. Grand Exalted Ruler: Frank J. Loneragan. Grand Secretary: J. E. Masters. Headquarters: Elks National Memorial Building, Chicago, Ill. A National War Commission is cooperating with the U.S. Government in the war effort, with the 1,400 Subordinate Lodges helping obtain enlistments of Seabees, establishing service centers, sending gift boxes to men in service, and conducting a campaign for the sale of War Bonds.

Emergency Committee to Save the Jewish People of Europe, founded July 25, 1943, to secure United Nations action to save the Jewish People of Europe from complete annihilation at the hands of the Nazis. Headquarters: 1 East 44 Street, New York City. The convention to organize the Committee was held in New York City, July 20-25, 1943. Other important activities occurred in October when 500 rabbis marched to Washington to present a petition to Vice-President Wallace and the White House; and when the Committee presented a tribute to Sweden and Denmark for taking steps to protect the Danish Jews.

Engineering Societies, listed under *Civil Engineers*, *Electrical Engineers*, *Mechanical Engineers*, *Mining and Metallurgical Engineers*.

English Institute, The, founded in 1939 to afford an opportunity for mature scholars in the field of English to meet together in a series of informal conferences to discuss questions of literary and philological research. Chairman: Ernest Hunter Wright. Secretary: Rudolf Kirk, Rutgers University, New Brunswick, N.J. Selected papers read at the sessions are published in the *English Institute Annual*. The fourth volume appeared in 1943. Activities of the Institute have been suspended until after the war.

English-Speaking Union of the United States, founded in 1920 to draw together the English-speaking people of the

world. It cooperates with the English-Speaking Union of the British Empire, Dartmouth House, London. Membership: about 15,000. Headquarters: 30 Rockefeller Plaza, New York City. President: James R. Angell. Chairman: Henry J. Fisher. Treasurer: Charles A. Wight. General Secretary: Mrs. W. Henry France.

Entomologists, American Association of Economic, listed under *Economic*.

Ethnological Society, American, founded in 1842. The Society meets regularly at the American Museum of Natural History for lectures and discussions of scientific work and problems in anthropology. Membership: 252. President: Harry L. Shapiro. Secretary: E. Adamson Hoebel, New York University, Washington Square East, New York City.

Eugenics Society, Inc., American, founded in 1926 to improve the quality of future citizens through formulation of eugenic policies, public education, and encouragement of research. Membership: 500. President and acting executive officer: Dr. Maurice A. Bigelow. Secretary: Chauncey Belknap. Headquarters: 1790 Broadway, New York City.

Exchange Club, The National, founded in 1911 for the purpose of educating, improving, and developing the capabilities of the members of the clubs chartered by this corporation and of the citizens of the communities, municipalities, and states in which such clubs are chartered. Membership: 40,000. National President: Theron M. Hall. National Secretary: Herold M. Harter. Headquarters: 335 Superior Street, Toledo, Ohio. As an educational service, the Club publishes *The Exchange Club Manual*, which is used extensively by civilian defense organizations, as well as by Exchange Clubs, for setting up operation of wartime projects on the home front. The entire organization concentrates upon this work as its major project during the war.

Falk Foundation, see *PHILANTHROPY*.

Farm Bureau Federation, American, organized in 1920 to meet and solve the pressing economic problems of agriculture. Membership: 591,230. President: Edward A. O'Neal. Secretary-Treasurer: R. B. Corbett. Headquarters: 58 East Washington Street, Chicago, Ill. Since its inception, the Federation has labored to further such projects as better farm-to-market roads; adequate credit facilities; freedom of competition among transportation agencies; solution of problems of irrigation; adequate appropriations for the Forest Service; development of rural youth programs.

Farm Chemurgic Council, National, organized in 1934, to advance the industrial use of American farm products through applied science. Membership: 3,000. President: Wheeler McMillen. Secretary: Ernest L. Little. Headquarters: 50 West Broad Tower, Columbus, Ohio. The Council has scheduled many meetings for 1944.

Farmer Cooperatives, National Council of, founded in 1929 to serve, represent, and coordinate, nationally, the program and efforts of farmers' cooperative purchasing and marketing associations. Membership: 4,600 associations. President: O. C. Teague. Executive Secretary: E. T. Benson. Headquarters: 1731 I Street, N.W., Washington, D.C. The regular meeting of Council delegates from all parts of the nation will be held in Chicago, Jan. 5-7, 1944.

Farmers' Educational and Cooperative Union of America, founded in 1902 to secure equity, establish justice, and apply the Golden Rule. Membership: 160,000, not including honorary members. President: James G. Patton. Secretary: Emil Loriks. Headquarters: 8501 E. 46th Avenue, Denver, Colorado.

Federal Union, Inc., founded in 1889, and having as its goal American leadership in forming a federal union of free peoples as the nucleus of a world government. Membership: about 10,000. President: Clarence K. Streit. Secretary: Percival F. Brundage. Headquarters: 1728 Connecticut Ave., Washington 9, D.C. The 3rd annual national convention of the Union was held in Peoria, Ill., Nov. 12, 13, 14, 1943. In the 1942 elections the Massachusetts Federal Union referendum gained a three to one favorable vote. Current information is available in the monthly organ, *Federal Union World*.

Field Service, American, a volunteer ambulance service on active duty with Allied troops overseas, with men and vehicles evacuating battle wounded in the North African, European and Burma theaters. Enlistments are open to men in limited service classifications of Selective Service. The American Field Service was originally organized at the start of World War I and served throughout that conflict with the French armies. In 1939 the ambulance service was actively reorganized. The renewed Service was sent to France where it served until the German occupation. In 1940 in answer to a request from General Wavell the Service sent the voluntary ambulance corps to serve with British Forces in the Middle East, where they were attached to Montgomery's Eighth Army during the battle for North Africa. The Burma assignment came as an outcome of the work done by the Americans in the desert campaign. Headquarters: 60 Beaver Street, New York City.

Fire Protection Association, National, founded in 1896 to promote the science and improve the methods of fire

protection and prevention, to obtain and circulate information, and to secure the cooperation of its members in establishing safeguards against fire loss. Membership: 7,604. President: David J. Price. General Manager: Percy Bugbee. Headquarters: 60 Batterymarch Street, Boston, Mass. See FIRE PROTECTION.

Fire Underwriters, National Board of, an educational, factual, and engineering organization founded in 1866 and supported by the capital stock fire insurance business. Membership: 208. President: J. M. Thomas. General Manager: W. E. Mallalieu. Headquarters: 85 John Street, New York City. The 1944 meeting will be held May 25 in New York City.

Fire Waste Council. See FIRE PROTECTION.

Food Technologists, The Institute of, established in 1939 to provide a professional organization which will facilitate interchange of ideas, stimulate and promulgate the results of research and work in the application of science to the food industry, and encourage the development of food technology as a profession. Membership: about 1,500. President: Roy C. Newton. Secretary-Treasurer: George J. Hucker, Geneva, New York. Regional sections have been granted charters in Southern California, Northern California, New England, and Chicago.

Foreign Born, American Committee for Protection of, listed under Protection.

Foreign Policy Association, Inc., founded in 1918 to carry on research and educational activities to aid in the understanding and constructive development of American foreign policy. Membership: 18,500. President: Frank Ross McCoy. Secretary: Dorothy F. Leet. Headquarters: 22 East 38 Street, New York City. The Association publishes a weekly *Bulletin* including the Washington News Letter; semi-monthly *Foreign Policy Reports*; and *Headline Series*. The annual meeting was held in December, 1943. Discussion luncheons are scheduled periodically at the Waldorf-Astoria, New York City, and in nineteen branch cities.

Foreign Relations, Inc., Council on, a nonpartisan, non-commercial research organization, founded in 1917 to study the international aspects of America's political, economic, and financial problems. Membership: 500. President: Norman H. Davis. Executive Director: Walter H. Mallory. Headquarters: 45 East 65 Street, New York City. The Council holds meetings and conferences, and maintains a reference library on international affairs. It carries on a program of research and publishes: a quarterly review, *Foreign Affairs*; two annuals, *The United States in World Affairs* and *The Political Handbook of the World*; and individual volumes on international questions.

Foresters, Society of American, founded in 1900 to represent, advance, and protect the interests and standards of the profession of forestry and to provide a medium for the exchange of professional thought. Membership: 4,708. President: Dr. Henry Schmitz. Executive Secretary: Henry E. Clepper. Headquarters: Mills Building, Washington, D.C.

Forestry Association, The American, founded in 1875, is a citizens' organization for the advancement of intelligent management and use of the country's forests and their related resources of soil, water, wildlife, and outdoor recreation. Membership: 13,000. President: W. S. Rosecrans. Executive Secretary: Ovid Butler. Headquarters: 919 Seventeenth Street, Washington 6, D.C. In addition to the publication of a monthly magazine, *American Forests*, the Association carries on educational projects in various fields.

Foster Parents' Plan for War Children, Inc., founded in 1936 to help children of all nationalities suffering as a result of war. Executive Chairman: Edna Blue. Secretary-Treasurer: Ann Landress. Executive Secretary: Eric G. Muggerridge. British Headquarters: 42 Woodberry Down, London N4, England. American Headquarters: 55 West 42 Street, New York City. The Plan operates 41 projects in England, which include training schools for farmers, nurses, and social workers, as well as hostels for children of all nationalities—Polish, Czech, French, Dutch, Belgian, Spanish, Austrian, Norwegian, anti-Nazi German, and British.

France Forever, founded in September, 1940, to let the voice of France be heard in the United States, and to strengthen Franco-American friendship. Chapters: 52 in the United States. Membership: about 16,000. Honorary National President: Eugène J. Houdry. President: Richard de Rochemont. Executive Vice-President: Jules Jeandros. Headquarters: 587 Fifth Avenue, New York City 17. Activities in 1943: Mass meetings—14th of July (Bastille Day); 11th of November. Bi-monthly bulletin *Free France*; printed folders on current events; weekly radio broadcasts; parades; cinematographic service; general information about France.

Fraternal Congress of America, National, founded in 1886 to unite all fraternal benefit societies of America for mutual improvement and concert of actions. Membership: 102 societies. President: Mrs. Grace W. McCurdy. Manager: Foster F. Farrell. Headquarters: 35 East Wacker Drive, Chicago 1, Ill. The 1944 meeting will be held in September.

Free World Association, founded in 1941, and intended to educate public opinion on how to win the war and the peace, and to prepare public opinion for a world organization based on international political and economic democracy. Membership: 29 national sections. Chairman of the Executive Committee: Hugh Moore. Secretary-General: Louis Dolivet. Headquarters: 8 West 40 Street, New York City. The Association publishes seven editions of the *Free World Magazine* and organizes studies for the various continents on their specific problems of reconstruction; also has seminars, and studies have been organized in connection with the International Institute for Universal Democracy.

French Relief Societies, Inc., Coordinating Council of, established March, 1941, to coordinate the work of organizations in the United States extending relief to France; sends food and clothing to French prisoners of war and clothing to French children; also supplies and funds for child welfare in North Africa; operates French Seamen's Foyer in New York; joins Fighting French Relief Committee, Inc., in supporting foyers and ambulances in North Africa. President: Forsyth Wickes. Executive Chairman: Miss Anne Morgan. General Secretary: W. S. Davenport. Headquarters: 457 Madison Avenue, New York City. Board Meetings are held once a month in New York.

Friends Service Committee, American, founded in 1917, and representing the Religious Society of Friends in fields of social action, engaging in both domestic and foreign projects to express the Quaker principle that constructive and nonviolent service can resolve conflicts. Official membership: 150. Chairman: Rufus M. Jones. Executive Secretary: Clarence E. Pickett. Headquarters: 20 South 12 Street, Philadelphia, Pennsylvania. Meetings principally in Philadelphia are scheduled for January through May, 1944.

Future Farmers of America (F.F.A.), founded November, 1928, as national organization of, by, and for farm boys studying vocational agriculture in public secondary schools. Primary aim, development of agricultural leadership, cooperation, and citizenship. Specific purposes intend to strengthen confidence of farm boys and young men in their work; create and nurture a love of country life and intelligent choice of farming occupations; improve the rural home; encourage thrift, scholarship, and organized rural recreation. Membership: 208,292 in 6,745 local chapters of 47 States, Hawaii, and Puerto Rico. President: Robert Bowman. National Executive Secretary: A. W. Tenney. Headquarters: U.S. Office of Education, Washington 25, D.C. During 1943, Star Farmer of America was Wayne Boothe, Cordell, Okla. Champion public speaker was Howard Barlow, Bear River High School, Tremonton, Utah. Gold Emblem chapters were Garber, Okla.; Bruceton Mills, W.Va.; Bagdad, Ky.; Stamping Ground, Ky.; Chataignier, La.; and Flathead, Mont. 1944 National Convention was scheduled for October in Kansas City, Mo.

Garden Club of America, founded in 1913. Membership: about 8,000. Secretary: Mrs. Barent Loefferts. Headquarters: 598 Madison Avenue, New York City 22.

Gas Association, American, founded in 1918 by holding companies, service companies, gas operating companies, manufacturers of gas appliances and equipment, and individuals. Membership: 5,000. President: Ernest R. Acker. Managing Director: Alexander Forward. Secretary: Kurwin R. Boyes. Headquarters: 420 Lexington Avenue, New York City.

Geographical Society, American, a research institution founded in 1852. Membership: 3,660. President: Roland L. Redmond. Director: Dr. John K. Wright. Headquarters: Broadway at 156 Street, New York City. During 1943 the Society published *Mirror for Americans: Likeness of the Eastern Seaboard 1810* by Ralph H. Brown; *Japan: A Geographical View* by Guy-Harold Smith and Dorothy Good with the collaboration of Shannon McCune; and two sheets of the *Map of Hispanic America*, 1:1,000,000, bringing the number to 105 out of a total of 107 sheets.

Geographical Society, Royal, founded in 1830 for the advancement of geographical science. Membership: circa 4,900. President: Sir George Clerk. Secretary: Arthur R. Hinks. Headquarters: Royal Geographical Society, Kensington Gore, London, S.W. 7. The Society publishes the monthly *Geographical Journal*, technical publications, and maps.

Geographic Society, The National, founded in 1888 for the increase and diffusion of geographic knowledge. Membership: 1,200,000. President: Gilbert Grosvenor. Vice President: John Oliver La Gorce. Secretary: George W. Hutchison. Headquarters: 1146 Sixteenth Street, Washington, D.C. During 1943 the Society continued its archaeological investigations among pre-Columbian ruins in southern Mexico in cooperation with the Smithsonian Institution. The work, under the leadership of Dr. Matthew W. Stirling, uncovered at La Venta, State of Tabasco, art objects fashioned from jade of the highest quality yet found in the Western Hemisphere; mosaic floors made of tiles of polished green serpentine; flat-topped altars with carved decorations; and a four-foot serpentine statue of a monkey with a semihuman face.

The Society placed on exhibit in its Administration Building a plaster cast of one of the most striking objects unearthed during the progress of the investigations in southern Mexico—a colossal sculptured human head found near La Venta in 1940. Field studies of staff members during the year included those of B. Anthony Stewart in Haiti and the Dominican Republic, W. Robert Moore in Brazil, and Luis Marden in Nicaragua and Costa Rica.

Continuing its special cooperation in the war effort, the Society made available to the armed forces and other Government agencies its vast fund of geographic information, photographs and maps covering all parts of the world. As supplements to its official publication, the *National Geographic Magazine*, the Society issued during 1943 the following large 10-color wall maps: Africa; Northern and Southern Hemispheres; Europe and the Near East; Pacific Ocean and the Bay of Bengal; and the World. The latter map was on a special projection showing the land masses and seas in a unified picture. Geographic News Bulletins, giving timely information in regard to places and areas brought into the world news by war activities, were furnished to more than 500 leading daily newspapers in the United States. Similar material covering current geographic developments were incorporated in the Society's Illustrated School Bulletins and were sent into more than 30,000 schoolrooms to aid in keeping the teaching of geography up to date.

Gideons, The International (The Christian Commercial Men's Association of America), founded in 1899 to advance the placing of Bibles in hotels, hospitals, penal institutions, and public schools. Membership: about 15,000. President: A. E. Lewis. Secretary: Nellie F. Dewar. Headquarters: 202 South State Street, Chicago. The organization has distributed nearly six million Testaments to the armed forces.

Girl Scouts, Inc., founded in 1912 to help girls develop as good citizens and resourceful people through group self-government and activities in the following fields: home-making, arts and crafts, nature, the out-of-doors, literature and dramatics, community life, international friendship, sports and games, health and safety, music and dancing, and vocational exploration. Membership: 816,893. President: Mrs. Alan H. Means. National Director: Mrs. Paul Rittenhouse. Headquarters: 155 East 44 Street, New York City. Girl Scout Anniversary Week was celebrated Mar. 12-18, and Girl Scout Week, Oct. 31-Nov. 6, 1943.

In 1943 as in 1917-18, war caused an increased number of girls to join the Girl Scouts to serve their country on the home front. The membership at the end of August had increased approximately 99,000 since the first of the year. In order to serve more girls and provide constructive training for future citizens, the organization worked out methods of cooperation with other national groups concerned with youth—the National Congress of Parents and Teachers, representatives of the Roman Catholic, Protestant, and Jewish faiths, the National Education Association, and many others. Girl Scouts in 1942 had given more than 5,000,000 recorded hours of service to community and country, the figure for 1943 was expected to be much greater. The number of girls who went to camp reached a new high in the summer of 1943. The Scouts' Juliette Low Memorial Fund, set up "to foster friendship among girls of all nations" presented \$7,000 to Mme. Chiang Kai Shek for the support of an orphanage near Chungking. This contribution was in addition to others which had been made to aid Greek, British, and Russian children.

Grange, The National, an Order formed in 1867 to give to the American farmer better social and educational opportunities, economic betterment, and higher spiritual and patriotic idealism; active in cooperative work and in State and National Legislation. Membership: 800,000 in 8,000 subordinate Granges. Master: Albert S. Goss. Secretary: Harry A. Caton. Headquarters: 744 Jackson Place, N.W., Washington, D.C.

Guggenheim Foundation, see PHILANTHROPY.
Hadassah (The Women's Zionist Organization of America, Inc.) founded in 1912 to foster Zionist ideals in America, and to conduct activities in Palestine which include promotion of public health, land redemption and afforestation, and immigration and colonization through Youth Aliyah. Senior membership: 100,000; Junior 25,000. President: Mrs. Moses P. Epstein. Executive Secretary: Miss J. N. Leibel. Headquarters: 1819 Broadway, New York City. Since the war an intensified health program providing cooperation with Allied and American medical authorities in Palestine and a wide American affairs program of education for democracy and defense work here have been initiated. Full use of Hadassah institutions was offered to the United States after Pearl Harbor.

Hayden Foundation, see PHILANTHROPY.
Health, see under *Public Health*.

Health Council, National, founded in 1921 to consolidate and correlate the activities of the member agencies and other activities for the betterment of health. Membership: 21 member agencies. President: Dr. George S. Stevenson. Secretary: Eleanor Brown Merrill. Headquarters: 1790 Broadway, New York City. The annual meeting is held in January or February of each year.

Heating and Ventilating Engineers, American Society. See HEATING AND VENTILATING.

Heckscher Foundation, see PHILANTHROPY.

Henry George School of Social Science, founded in 1933 to teach fundamental economics and social philosophy. Hundreds of volunteer instructors throughout the country. Classes are held at headquarters, in public buildings, YMCAs, churches, homes, offices, etc. Free correspondence courses offered to students throughout the world. Director: Margaret E. Bateman. Headquarters: 80 East 29 Street, New York City 16.

Highway Users Conference, National, a research agency, founded in 1932, relating to the economics of highway transportation, now giving attention to problems of the war and postwar periods. Chairman: Alfred P. Sloan, Jr. Director: Chester H. Gray. Headquarters: 938 National Press Building, Washington 4, D.C. Highway barriers, taxes, roads of types and mileages adequate for local and interstate commerce, and use of highway funds for highway purposes are important aspects of studies currently being made.

Hispanic Society of America, The, founded in 1904 as a free public museum and library devoted to Spanish and Portuguese art and literature. Membership is limited to 100; corresponding membership to 300. President: Archer M. Huntington. Secretary: Herbert Adams. Headquarters: Broadway, between 155th and 156th Streets, New York City. The Society has issued about six hundred volumes relating to Spanish art, history, and literature, and publishes *Notes Hispanicæ*, an annual publication devoted to the arts and the craftsmanship of Spain and Portugal.

Historical Association, American, founded in 1884 to promote historical studies, the collection and preservation of historical manuscripts, etc. Membership: 3,600. President: Nellie Neilson. Executive Secretary: Guy Stanton Ford. Headquarters: Study Room 274, Library of Congress Annex, Washington 25, D.C. The annual meeting in 1943 was held in New York City on December 29 and 30.

Home Economics Association, American, organized in 1908 for development and promotion of standards of home and family life. Membership: approximately 15,000 individuals, 2,000 student clubs, and 11 groups of home-makers. President: Jessie W. Harris. Executive Secretary: Gladys M. Wyckoff. Headquarters: 620 Mills Building, Washington, D.C. During 1943 the Association directed its resources toward serving in the national emergency, and at the same time reaffirming the support of its long-time program by striving to meet the need for intensified service of home economics associations to the Federal and State agencies for civilian defense, especially those concerned with nutrition, housing, family welfare, health, consumer goods standards and simplification, consumer interests, and education. Through the National Consumer-Retailer Council, the Association is contributing to a post-war consumer-retailer platform and to an informative advertising campaign. Five international fellowships were awarded to young women from New Zealand, Philippine Islands, China, and Cuba. The Borden Award was granted to Hazel K. Stiebeling for outstanding work in nutrition. A wartime institute was held at College Park, Md., June, 1943.

Hospital Association, American, founded in 1899 to promote the welfare of the people through the development of hospitals and out-patient service. Membership: 3,201 institutions and 2,224 individuals. President: Frank J. Walter. Treasurer: Dr. Harley A. Haynes. Headquarters: 18 Division Street, Chicago. In 1943 the Award of Merit was granted to Dr. Arthur C. Bashmeyer. The National Hospital Day Certificates of Award went to the Minnesota Hospital Association as State winner. The Hospital Council of St. Louis (Mo.) was adjudged winner in city-wide observance.

Humane Association, The American, founded in 1877 for the prevention of cruelty to children and animals. Membership: 11,000. President: Sydney H. Coleman. General Manager: Walter J. Dethloff, 135 Washington Avenue, Albany, N.Y.

Hygiene. See under *Mental Hygiene*; *Social Hygiene*.
Indoor Climate Institute. See HEATING AND VENTILATING.

Industrial Conference Board, Inc., The National, founded in 1916 for scientific research, professional education, practical service, and public information in the field of business economics and business management. President: Dr. Virgil Jordan. Secretary: Harold F. Browne. Headquarters: 247 Park Avenue, New York City.

Industrial Council, National, founded in 1907 to provide state and local industrial associations with a forum for the discussion of industrial and associational problems and programs. Membership: 267 associations. Chairman: W. P. Witherow. Executive Director: T. M. Brennan. Headquarters: 14 West 49 Street, New York City.

Industrial Democracy, League for, founded in 1905 with the purpose of education for increasing democracy in our economic, political, and cultural life. Membership: 2,000. President: Dr. Bjarne Braatoy. Executive Director: Harry W. Laidler. Headquarters: 112 East 19 Street, New York City. Meetings scheduled in 1944 include conferences in New York and Washington on problems of postwar reconstruction on the national and international

fronts and a series of pamphlets on *Freedom from Want, World Cooperation for Peace and Bread*, etc.

Industrial Organizations, Congress of (C.I.O.), founded in November, 1935, to bring about the effective organization of the working men and women of America, regardless of race, creed, color, or nationality, and to unite them for common action into labor unions for their mutual aid and protection. Membership: 5,000,000. President: Philip Murray. Secretary-Treasurer: James E. Carey. Headquarters: 718 Jackson Place, Washington, D.C. The Congress achieved an outstanding record in 1942 in all basic war production industries, with C.I.O. workers mainly responsible for a 400 per cent increase in production since Pearl Harbor. One million members are serving in the U.S. armed forces.

Industrial Relations Counselors, Inc., established in 1926 to advance the knowledge and practice of human relationships in industry, commerce, education, and government. Director: T. H. A. Tiedemann. Headquarters: 1270 Sixth Avenue, New York City. The organization conducts research, offers a consulting service, mainly for industrial corporations, and maintains a specialized industrial-relations library and an information service. Fifteen volumes and seven monographs were published by the close of 1943.

Industrial Research Institute, affiliated with the National Research Council and founded in February, 1938, to promote, through the cooperative efforts of its members, constant improvement of methods and more economical and effective management in industrial research. Membership: 57 companies. Chairman: W. R. Hainsworth. Secretary: C. G. Worthington. Headquarters: 60 East 42 Street, New York City. Meetings were held in 1943 in Philadelphia, New York, and Chicago. The first meeting in 1944 was scheduled to occur in New York in January.

Information Bureau, Inc., National, a nonprofit membership corporation which analyzes national and international charitable organizations for the advice and protection of contributors and philanthropic agencies, founded in 1918. Chairman: Allen Wardwell. Executive Director: D. Paul Reed. Headquarters: 205 East 42 Street, New York City 17.

International Education, Institute of, a nonmembership organization, founded in 1919 to increase international understanding through interchange of students, arranging tours for foreign lecturers, teacher and librarian exchanges, and publication of books, pamphlets, and a News Bulletin. The Institute serves as a general clearing house of information in its field. Director: Stephen Duggan. Assistant Director: Edgar J. Fisher. Headquarters: 2 West 45 Street, New York City. For the academic year 1943-44, 335 fellowships and scholarships were awarded for study at United States colleges and universities and 16 for Americans at foreign universities. Since 1940 the Institute's work in the field of inter-American cultural relations has greatly expanded, and increased assistance has been rendered to displaced foreign scholars. More than 240 State Department fellowships have been arranged for Chinese students during the past year through a two-man committee composed of the Directors of the Institute of International Education and the China Institute of America.

International Education Assembly. See EDUCATION.

International Exchanges and Scholarship, Institute of. See EDUCATION.

Investment Bankers Association of America, organized in 1912 to serve investment bankers through mutual cooperation, maintenance of high standards of service, self-regulation, and support of appropriate legislation. Membership: 604 Main office, 611 Branch office. Alden H. Little, Executive Secretary and Treasurer. Headquarters: 33 South Clark Street, Chicago.

Iranian Institute. See ART under Building.

Iron and Steel Institute, American, founded in 1908 to promote the interests of the industry. Membership: about 1,800. President: Walter S. Tower. Secretary: G. S. Rose. Headquarters: 350 Fifth Avenue, New York City. The 52nd general meeting was held in New York, May 27, 1943.

Italian-American Labor Council, founded in December, 1941, to coordinate all activities upholding democratic principles in the fight against fascism and in harmony with the fundamental elements and objectives of labor unionism; to extend assistance to Italian political refugees, victims of fascist reaction; and to integrate moral and financial Italian-American forces and lead them toward the goal of victory. Membership: 250,000. President: Luigi Antonini. Secretary: Joseph D. Procopio. Headquarters: 202 West 40 Street, New York City. On Oct. 12, 1943, the Italian-American Labor Council at the "Victory for Freedom" Dinner, given in New York City, launched a drive to raise \$250,000—this fund being the goal with which this institution intends to finance the rebuilding of the "Free Trade Unions" in Italy.

James Foundation, see PHILANTHROPY.

Jewish Women, National Council of, founded in Chicago in 1893 to carry on a program of service to the foreign born, and for education and action in social legislation, international relations, and contemporary Jewish affairs. Membership: 65,000 individuals in 215 Senior, 100

Junior, and 38 Councillette Sections throughout the United States and Canada. President: Mrs. Joseph M. Welt. Recording Secretary: Mrs. Mortimer Brenner. Executive Director: Flora R. Rothenberg. Headquarters: 1819 Broadway, New York City. The Council celebrated its 50th anniversary in 1943. Conventions are held triennially for the Senior Sections and biennially for the Junior; these coincided in 1943 and were held jointly in November in Chicago.

Jewish Societies. See *Christians and Jews, The National Conference of*; *Emergency Committee to Save the Jewish People of Europe*; *Jewish Women, National Council of*. **Joint Distribution Committee, Inc., The American Jewish (J.D.C.)**, founded during the first World War to give emergency and reconstructive aid to needy Jews overseas. Membership: 3,638 in the National Council. Chairman: Edward M. M. Warburg. Executive Vice-Chairman: Joseph C. Hyman. Secretary: Moses A. Leavitt. Headquarters: 270 Madison Avenue, New York City. In four years of war, from September, 1939, to September, 1943, the J.D.C. spent a total of \$27,857,000 to provide these services to an average of 900,000 persons annually: feeding, shelter, clothing, medical aid and child care, emigration assistance, vocational training, cultural and educational help, resettlement and economic aid. During that period 68,000 persons were enabled to emigrate from Europe to the Western Hemisphere and Palestine.

Since Pearl Harbor, local committees affiliated with the J.D.C. in enemy-occupied countries have continued essential relief programs by borrowing money, food and commodities locally on the basis of a J.D.C. promise to repay the loans thus incurred when possible without aiding the enemy. J.D.C. work on behalf of native and refugee Jews goes on in Portugal, Spain, Switzerland, Sweden, Algeria, French Morocco, Tunisia, Tangier, Turkey, Iran, Palestine, and other areas. It is at present shipping food and clothing packages to refugee Jews in Soviet Asia from supply points in Palestine and Iran. Its major program outside Europe is in Latin America, where there are 125,000 immigrants whom J.D.C. programs of relief and rehabilitation have helped to fit into their new lives.

Juilliard Foundation, see PHILANTHROPY.

Junior Leagues of America, Inc., Association of the, founded in 1921, to unite the 154 local Junior Leagues and through them educate their members for effective volunteer service in community agencies and for shaping welfare programs. Membership: 37,000. President: Mrs. Linville K. Martin. Executive Secretary: Mrs. Winthrop Pennock. Headquarters: Hotel Waldorf-Astoria, New York City. The 1943 annual conference was held in New York City, May 7-10.

Just and Durable Peace, Commission on a, formed in December, 1940, to clarify the mind of Christian churches regarding the moral, political, and economic foundations of an enduring peace. Membership: 100. Chairman: John Foster Dulles. Secretaries: Drs. Walter W. Van Kirk and Luman J. Shafer. Headquarters: 297 Fourth Avenue, New York City 10. Activities of 1943 included an International Round Table of Christian Leaders at Princeton, N.J. in July, and a nationwide campaign by the Christian Mission on World Order, November 1-20, stressing the need for a postwar world based on Christian principles.

Kellogg Foundation, see PHILANTHROPY.

Kindergarten Association, National, founded in 1909 to help secure the advantages of kindergarten education for all the nation's children. Membership varies from 2,245 to 8,000. President: Maj. Bradley Martin. Executive Secretary: Bessie Locke. Headquarters: 8 West 40 Street, New York City 18. The Association has given advice to many who wished to have a class opened in their public school, has furnished many thousand free leaflets on kindergarten values and has loaned prepared programs and the film: "A Day in the Kindergarten." As a result of the work done by the Association in 1943, 2,700 children have been enrolled in new kindergartens, bringing the total since 1909 to over 1,150,000 children. Weekly Home Education articles dealing with child behavior problems, are furnished free to the press and to Home Demonstration agents; present combined circulation is over 33,268,400. The radio has been used with beneficial effect.

King's Daughters and Sons, International Order of The, founded in 1886 "for the development of spiritual life and stimulation of Christian activities." Executive Secretary: Miss Kate C. Hall. Headquarters: 144 East 37 Street, New York City 16. The next meeting is scheduled to be held in Jackson, Miss., 1944.

Kiwanis International, founded in 1915, to unite leaders in each business and profession for civic, social, and welfare service to their communities. Membership: 120,350 (2,195 clubs) in the United States and Canada. President: Donald B. Rice. Secretary: O. E. Peterson. General Office: 520 N. Michigan Ave., Chicago. Activities in community service are a continuous program in fields of aid to underprivileged children and to youth, vocational assistance, urban-rural relations, safety, support of churches, all war work, etc. Due to war conditions the 1943 convention was cancelled and will not be resumed until the war ends.

Knights of Columbus, a fraternal benefit society founded

in 1882. Membership: 437,804. Supreme Knight: Francis P. Matthews. Supreme Secretary: Joseph F. Lamb. Headquarters: 45 Wall Street, New Haven, Conn.

Knights of Pythias, a fraternal organization founded in 1864. Membership: 450,000. Supreme Chancellor: John Lee Smith. Supreme Keeper of Records & Seal: Harry M. Love, 1054 Midland Bank Building, Minneapolis, Minn. The Supreme Lodge meets biennially, the next meeting to be in August, 1944.

Ku Klux Klan, Inc., Knights of the (K.K.K.), founded in 1915 to organize a solid block of native-born, white, Protestant, Gentile Americans for the purpose of promoting under oath the following principles: the tenets of the Christian religion; white supremacy; protection of pure womanhood; just laws and liberty; closer relationship of pure Americanism; upholding of the Constitution of the United States; sovereignty of State rights; separation of Church and State; freedom of speech and press; closer relationships between Capital and Labor; preventing the causes of mob violence and lynchings; preventing unwarranted strikes by foreign labor agitators; prevention of fires and destruction of property of lawless elements; limitation of foreign immigration; much needed local reforms; law and order. Membership: over 5,000,000. Imperial Wizard (President): James Arnold Colescott. Imperial Kligrapp (Secretary): J. Floyd Johnston. Headquarters: 3155 Roswell Road, Atlanta, Ga. Concentrating our entire effort since Aug. 1, 1941, in a program to unite all groups in America in preparation for and in winning the war. Units throughout the nation are conducting contests to promote the sale of war stamps and bonds. Our membership is assisting in giving wide distribution to information released by the Office of War Information and other government agencies.

Labor, American Federation of (A.F.L.), founded Nov. 15, 1881, as an organization of wage earners into trade unions and groups of unions for the advancement of their economic interests. Membership: 6,564,141. President: William Green. Secretary-Treasurer: George Meany. Headquarters: A.F.L. Building, 901 Massachusetts Ave., N.W., Washington, D.C. The annual convention was held in Boston, Mass., Oct. 4-14, 1943. The 1944 convention is scheduled to open on the third Monday in November, in New Orleans, La.

Labor Legislation, American Association for, an organization of socially minded economists, lawyers, journalists, government administrators, labor leaders, and employers, founded in 1906 to attack needless industrial evils from the general welfare viewpoint. It functions as the American arm of the International Association for Social Progress. President: Joseph P. Chamberlain. Headquarters: 131 East 23 Street, New York City.

Law Institute, The American, founded in 1923 to promote the clarification and simplification of the law and its better adaptation to social needs, to secure the better administration of justice, and to encourage and carry on scholarly and scientific legal work. Membership: 850. President: George Wharton Pepper. Director: William Draper Lewis. Headquarters: 3400 Chestnut Street, Philadelphia. The annual meeting will likely be held in Philadelphia, May 9-11, 1944. See PRISONS.

League of Nations Association, Inc., founded in 1923 to teach the need for the cooperation of all nations in building an international organization as the essential basis of peace. Membership: 10,000. President: Dr. Frank G. Boudreau. Director: Clark M. Eichelberger. Headquarters: 8 West 40 Street, New York City. The Association cooperates with the Commission to Study the Organization of Peace in its publication of expert reports and its promotion of popular education. The Association supports the principles of the Atlantic Charter and seeks to spread knowledge of the United Nations as the probable nucleus of the new society of nations, after complete victory in the war is won. The 17th National High School Contest on the organization of peace was held on Mar. 26, 1943. A special committee of Americans formerly connected with the League's work is now conducting an inquiry into the future of the League of Nations. This inquiry will take the form of a series of expert reports, which will be publicized through a conference and over the radio.

Learned Societies, American Council of, founded in 1919 to promote the advancement of the humanistic sciences. Membership: 46 delegates (two from each of 23 constituent societies). Chairman: Fred N. Robinson. Director: Waldo G. Leland. Secretary-Treasurer: S. Whittemore Boggs. Headquarters: 1219 Sixteenth Street, N.W., Washington 6, D.C. Next annual meeting to be during last week in January, 1944. See ART under *Salvage and Restoration*.

Legal Aid Organizations, National Association of, founded in 1911 as a central body representing organizations engaged in rendering legal aid service to promote the work and to cooperate with the judiciary, the bar, and all organizations interested in the administration of justice. Membership: 57 organizations. Honorary President: Hon. Harlan F. Stone. President: Louis Fabricant. Secretary: Emory A. Brownell. Headquarters: 25 Exchange Street, Rochester, N.Y. Emphasis of the work in 1943 has been providing legal aid in home communities to servicemen. Member organizations are designated by the Army and

Navy to implement their legal assistance offices at military establishments. Over 16,000 cases handled for servicemen and dependents during first six months of 1943. Publications included Committee Reports and Proceedings, Annual Directory, Bulletins and The Nalao Brief Case.

Legion of Decency, National, founded in 1934 to review and evaluate morally current entertainment feature motion pictures and to encourage wholesome standards of morality and decency in the cinema. The Motion Picture Department of the International Federation of Catholic Alumnae is the reviewing group for the Legion of Decency. Membership of the Episcopal Committee on Motion Pictures: 5. Executive Secretary: The Very Rev. Monsignor John J. McClafferty. Assistant Executive Secretary: The Rev. Patrick J. Masterson. Chairman, Motion Picture Department, I.F.C.A.: Mrs. James F. Looman. Headquarters: 35 East 51st Street, New York City 22.

Library Association, The, founded in 1877 (incorporated by Royal Charter in 1898) to unite all persons engaged or interested in libraries, hold examinations and maintain a professional register, promote the establishment of public libraries, encourage bibliographical study, publish journals, and hold conferences. Membership: 6,500. President: Arundell Esdaile. Secretary: P. S. J. Welford. Headquarters: Chaucer House, Malet Place, London, W.C.1. The Association's Carnegie Medal for an outstanding children's book published in Great Britain during 1942 was awarded to D. J. Watkins-Pitchford for *The Little Grey Men*.

Library Association, American (A.L.A.), founded in 1876 to provide complete and adequate library coverage for the United States and Canada. Membership: 15,000. President: Althea H. Warren. Executive Secretary: Carl H. Milam. Headquarters: 520 N. Michigan Avenue, Chicago. The activities of the Association have been almost entirely converted to war. The A.L.A. Bulletin has served as a handbook of library war service. The *Library War Guide* is issued by OWI in consultation with A.L.A. and describes ways in which libraries can further the government war program. The Association has issued frequent booklists on phases of the war and has undertaken studies of several war-related situations which affect libraries. *Postwar Standards for Public Libraries* has been published and will serve as the basis for postwar library planning in this field. Postwar planning is also under way for school, college, and university libraries. The Association's annual conference was cancelled for 1943, but a series of institutes were held in all parts of the United States to allow librarians to consult together about war and postwar issues which should be emphasized in local library program planning and book-buying.

The A.L.A. International Relations Office was opened in Washington, and all international activities of the Association will be carried on here. Among these activities are the direction of American libraries in Mexico City, Managua and Montevideo; administration of a grant of \$150,000 for the purchase of books to be sent as gifts to Latin-American libraries; assembling of materials to restock libraries in war areas after the war and planning for postwar cooperation among the libraries of the world. The Newbery Award was conferred in 1943 on Elizabeth Janet Gray for *Adam of the Road*; the Caldecott Award on Virginia Burton for *The Little House*.

Lions Clubs, International Association of, founded in 1917 as an international association for local Lions Clubs, composed of business and professional men interested in the development of their communities. Membership: 150,000 in 4,400 clubs located in 14 countries; namely, British Honduras, Canada, China, Colombia, Costa Rica, Cuba, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, the United States, and Venezuela. President: E. G. Gill. Secretary-General: Melvin Jones. Headquarters: 332 S. Michigan Avenue, Chicago. Since the beginning of World War II the Lions have extended their activities to include everything possible to further the cause of the United Nations. Their activities have eight classifications: boys and girls; citizenship and patriotism; civic improvements; community betterments; education; health and welfare; safety, sight conservation and blind. From May 1, 1942, to Apr. 30, 1943, 66,507 separate activities were reported by Lions Clubs. The official publication of the organization is the *Lion Magazine*, issued monthly.

Little Business Men's League of America, founded in 1938 to unite the interests of small business men. Membership: 87,672. President: William Castleman. Secretary: Joseph R. Conkey. Headquarters: 619 North State Street, Chicago. The League's 1943-44 program is as follows: To secure legislation for government to create a financial credit structure to enable small business and new enterprise to secure loans at a low rate of interest in the post-war period, and to seek a fair distribution of machinery and materials which the government will need to dispose of after the war so that the little business men will have an equal opportunity in the purchase of same.

Macy Foundation, see PHILANTHROPY.

Management Association, Inc., American, founded by a merger of predecessor organizations in 1923 to provide executives of commercial and industrial companies with a means of exchanging information on management poli-

cies and techniques. Membership: 6,200. President: Alvin E. Dodd. Chairman of the Board: William L. Batt. Secretary: Henry J. Howlett. Headquarters: 330 West 42 Street, New York City.

Manufacturers, National Association of (N.A.M.), an organization of individuals, firms, and corporations engaged in manufacturing, founded in 1895 with the following general objectives: (1) The promotion of the industrial interests of the United States; (2) the fostering of the domestic and foreign commerce of the United States; (3) the betterment of relations between employers and their employees; (4) the protection of the individual liberty and rights of employer and employee; (5) the dissemination of information among the public with respect to the principles of individual liberty and ownership of property; (6) the support of legislation in furtherance of those principles and opposition to legislation in derogation thereof. Membership: 10,000. President: Robert M. Gaylord, President of Ingersoll Milling Machine Co., Chairman of Board; F. C. Crawford; Chairman of Executive Committee: William P. Witherov; Executive Vice-President: Walter B. Weisenburger. Secretary: Noel Sargent. Treasurer: Theodore G. Montague. Headquarters: 14 West 49 Street, New York City. Branch offices: Investment Building, Washington, D.C., 111 Sutter Street, San Francisco.

To the individual manufacturer the Association offers its trained and practical assistance in supplying accurate and reliable information on pertinent subjects. The Law Department is devoted strictly to matters which pertain to the pursuits of the association, and aims to keep its members fully abreast of all decisions and interpretations of proposed and enacted laws which affect their business interests.

The Association has Standing Committees on the following subjects: corporation peacetime planning; economic security; government finance; government relation to industry; industrial health; industrial relations policy with divisions dealing with labor negotiations, manpower, supervisory problems, and wages and salary problems; patents; postwar problems with three major subdivisions dealing with transition period problems, distribution and international relations; and war.

To advise the standing committees in their deliberations, the N.A.M. has a number of advisory groups—these being, research advisory group, economic advisory group, several advisory groups to the Postwar Committee, Eastern employment advisory group, Western employment advisory group, and medical advisory committee on industrial health, and a public relations advisory group.

The N.A.M. also has established the Economic Principles Commission which is making intensive studies and analyses of the nature, operations, achievements and problems of the free enterprise system, and is under the chairmanship of Robert R. Wason. Another important activity is headed up by the Better America Program which was organized in 1943 to reduce the Association's basic thinking and its constructive recommendations on long-range governmental policies to a series of visual presentations which can be used to crystallize industrial opinion, and which industrialists in turn can use to give Congressmen and other government officials an impressive picture of industrial thinking. It is under the chairmanship of H. W. Prentiss, Jr.

Within the N.A.M. there are several program committees to deal with specific groups in the economy. We may list these as the N.A.M. Committee on Cooperation with Churches; N.A.M. Committee on Cooperation with Agriculture; N.A.M. Committee on Cooperation with Education; and N.A.M. Committee on Home and Industry.

The Association has been engaged since 1934 in sponsoring the most widespread and complete program ever undertaken by organized industry to tell the story of private enterprise to the public, through the medium of the National Industrial Information Committee which is headed by Alfred P. Sloan, Jr., Chairman of the Board, General Motors Corporation. The public relations program has made extensive use of radio, motion pictures, outdoor billboards, newspapers, magazines, public speeches and every other medium of public expression which can be effectively utilized to tell industry's story.

Operating as an affiliated part of the National Association of Manufacturers, the National Industrial Council includes some 300 industrial associations of three categories: State Associations, Manufacturing Trade Associations, and Industrial Relations Associations. Organized since 1907, the Council provides an effective industrial contact with collective manufacturing membership in each section of the country. Frequent group meetings are held where viewpoints are exchanged and consensus reached. No policies, however, are fixed—each organization maintains complete autonomy.

The membership of the Association consists of individuals, firms and corporations engaged in manufacturing. The annual dues are based on capitalization, and the entire income of the Association is expended in the interests of its members. See POSTWAR PLANNING.

Markle Foundation, see PHILANTHROPY.

Masons. See FREEMASONRY.

Mathematical Society, American, founded in 1888 for the promotion and publication of research in mathematics.

Membership: 2,600. President: M. H. Stone. Secretary: J. R. Kline. Headquarters: Low Memorial Library, Columbia University, New York City. A War Policy Committee was active in the problems of research and instruction during 1943. A new series of monographs, *Mathematical Surveys*, was inaugurated in July. Meetings already scheduled for 1944 are New York City in February, April and October, Chicago in April and November, Berkeley, Calif., in April.

Mayors, United States Conference of, founded in 1932 as a clearing house for American cities on problems of municipal government. Membership: 225 cities over 50,000 in population. President: Mayor F. H. LaGuardia, New York City. Executive Director: Paul V. Betters. Headquarters: 730 Jackson Place, Washington, D.C.

Mechanical Engineers, The American Society of, founded in 1880 to promote mechanical engineering and allied arts and sciences. Membership: 17,849. President: Robert M. Gates. Headquarters: 29 West 39 Street, New York City 18. The Society participates in the war production program through public meetings, committee service in research and standardization, and the assembly of records of individual members available for key positions in the war effort. At the annual meeting, New York, Nov. 29-Dec. 3, 1943, the A.S.M.E. Medal was awarded to Lewis K. Silcox; the Holley Medal to Vannoy Bush; the Warner Medal to Igor I. Sikorsky; the Junior Award to Troels Warming; the Main Award to Mitchell C. Kazen; and the Undergraduate Student Award to William L. Hutton. Meetings are scheduled to be held in Birmingham, Ala., Apr. 3-5, 1944 (spring meeting); Pittsburgh, June 19-22, 1944 (semi-annual meeting).

Medieval Academy of America, founded in 1925 to conduct, encourage, and support research, publication, and instruction in medieval record, languages, literature, arts, archaeology, history, philosophy, science, and all other aspects of medieval civilization. Membership: 1,050. President: John S. P. Tatlock. Executive Secretary: Charles R. D. Miller. Headquarters: 1430 Massachusetts Avenue, Cambridge, Mass. The Haskins Medal, offered annually for a distinguished publication in the field of medieval studies, was awarded in 1943 for *The Tich-hill Psalter and Related Manuscripts*, by Donald Drew Egbert. Three volumes concerned with the Middle Ages were published in 1943. *Speculum*, the journal of the Academy, is published quarterly.

Medical Association, American, founded in 1847 to promote the science and art of medicine and the betterment of public health. Membership: 123,196. President: James E. Paullin. Secretary and General Manager: Olin West. Headquarters: 535 N. Dearborn Street, Chicago. The Distinguished Service Medal and Citation for distinguished service in the science and art of medicine was awarded, June 7, 1943, to Dr. Elliott P. Joslin, Boston. The Association will hold a scientific session in Chicago, 1944. See BIRTH CONTROL; LAW; PSYCHIATRY.

Medical Association, Canadian, founded in 1867 and interested in all matters concerning the practice of medicine. Membership: 7,000. President: D. Sclater Lewis, Montreal, Que. General Secretary: T. C. Routley. Headquarters: 184 College Street, Toronto, Canada.

Mental Hygiene, Inc., The National Committee for, founded in 1909 to promote interest and action throughout the United States in the prevention and control of mental illness and the conservation of mental health. Membership: 744. President: Dr. Adolf Meyer. Medical Director: Dr. George S. Stevenson. Headquarters: 1790 Broadway, New York City.

Metals, American Society for, an organization devoted to the promotion of the arts and sciences connected with either the manufacture or the treatment of metals. Membership: 17,700. President: M. A. Grossmann. Secretary: W. H. Eisenman. Headquarters: 7301 Euclid Avenue, Cleveland 3, Ohio. Highlighting the Society's activities for 1943 was the National Metal Congress and War Conference Display, held in Chicago, October 18-22. O. H. Mathewson (Chairman, Department of Metallurgy, Yale University) was appointed Edward De Mille Campbell Lecturer for 1943. The following awards were made: To Zay Jeffries (General Electric Co., Cleveland, Ohio), the newly created Gold Medal of the American Society for Metals; to Roy A. Hunt (Aluminum Company of America, Pittsburgh), the new A.S.M. Medal for the Advancement of Research; to Charles H. Herty, Jr. (Bethlehem Steel Co., Bethlehem, Pa.), the Sauvour Achievement Award; to Shadburn Marshall (Remington Arms Co., Bridgeport, Conn.), the Henry Marion Howe Medal; to National Secretary W. H. Eisenman, a founder membership in the Society. The National Metal Congress and War Conference Display for 1944 is scheduled to take place in Cleveland, Oct. 16-20, 1944.

Meteorological Society, American, founded in 1919 for the advancement and diffusion of knowledge of meteorology (including climatology) and its application to public health, agriculture, engineering, transportation, and other forms of industry and commerce. Membership: about 1,700. Secretary: Charles F. Brooks. Headquarters: Blue Hill Observatory, Milton 86, Mass. The Society publishes the *Bulletin* in English with abstracts and some articles in Spanish.

Milbank Memorial Fund, see PHILANTHROPY.

Mineralogical Society of America, founded in 1920 for the advancement of mineralogy, crystallography, petrology, and allied sciences. Membership: about 1,000. President: J. F. Schairer. Secretary: Paul F. Kerr. Headquarters: Columbia University, New York City.

Mining and Metallurgical Engineers, American Institute of, founded in 1871 to promote the arts and sciences connected with the production of useful minerals and metals and the welfare of those employed in these industries. Membership: 11,700. President: Chester A. Fulton. Secretary: A. B. Parsons. Headquarters: 29 West 39 Street, New York City, 18. The Anthony F. Lucas Medal was awarded in 1943 to John R. Suman; the Hunt Award to Marcus A. Grossmann; and the Johnson Award to James M. Stapleton. The 1943 annual meeting took place, February 14-18, in New York City with an attendance of 2,500; the fall meeting in Chicago.

Mission to Lepers, Inc., The American, organized in 1906, incorporated in 1920, to aid and preach the Gospel to people suffering from leprosy and to encourage their segregation, care and medical treatment throughout the world. Membership: 45,000. President: Dr. Wm. Jay Schieffelin. General Secretary: Dr. E. R. Kellersberger. Associate Secretary: Raymond P. Currier. Headquarters: 156 Fifth Avenue, New York City. The main events of 1943 were the continuing lectures of Dr. Kellersberger in medical schools and Army Camps, and the granting of \$40,000 and \$52,000 to aid leprosy work in China and India respectively.

Modern Language Association of America (M.L.A.), organized in 1883 to promote literary and linguistic research in all the fields of the Modern Languages and Literatures. Membership: 4,000. President: Rudolph Schervill. Secretary: Perry W. Long. Headquarters: 100 Washington Square, New York City.

Modern Woodmen of America, a fraternal life insurance society formed in 1883. Membership: 405,818. President: Oscar E. Aleshire. Secretary: J. G. Ray. Headquarters: Rock Island, Ill. The Society's 1941 Head Camp or national convention ratified an agreement with the Boy Scouts of America, through which Modern Woodmen undertook a nationwide sponsorship of Boy Scout troops.

Moose, Loyal Order of (Supreme Lodge of the World), a fraternal organization founded in 1888. Membership: 416,281. Director-General: Hon. James J. Davis. Supreme Governor: Mark R. Gray. Supreme Secretary: Malcolm R. Giles. Headquarters: Mooseheart, Ill.

Morale, Committee for National, established in August, 1940, with the basic ideal of studying conditions governing morale, and in the conviction that morale is not only the decisive force in military affairs but is indispensable for victorious national life. It undertakes the study of controlling factors of morale from every angle, and coordinates the research and conclusions of a considerable group of specialists in a series of recommendations both to the government and to private agencies. It consists of some 150 specialists representing a great variety of subjects. In addition to a panel of scientific consultants, there is an associate membership which is open to all interested in morale problems. President: Maj. George Fielding Elliot. Executive Secretary: Lorraine Lester. Headquarters: One East 57 Street, New York City. Publications: *Axis Grand Strategy*; *German Psychological Warfare*; *The White Book of the U.S. Foreign Policy*; *Axis-controlled "Neutral" News Sources*.

Motion Picture Engineers, Society of. See PHOTOGRAPHY.

Motion Picture Producers and Distributors of America, Inc., organized in 1922 to foster the common interest of those engaged in motion picture industry. President: Will H. Hays. Secretary: Carl E. Milliken. Headquarters: 28 West 44 Street, New York City. The annual meeting was held in New York City in March, 1944.

Municipal Association, American, the national federation of the State Leagues of Municipalities, founded in 1924. It carries on activities designed to assist member leagues in their work of serving and representing their member municipalities. Membership: 42 State Leagues, representing 8,036 cities and towns. President: Charles E. Lee. Executive Director: Earl D. Mallory. Headquarters: 1813 East 60 Street, Chicago, Ill. The Association provides a consulting service on special phases of municipal government, and keeps its members informed of federal legislation affecting municipal government; it represents the interests of municipalities nationally, in much the same way that the state leagues represent municipalities before the state governments.

Municipal League, National, a nonprofit citizen organization founded in 1894 and serving as a national clearing house for information on local government improvement and the development of a more enlightened citizenry through the preparation of model laws and administrative systems and cooperation with local civic organizations. Membership: 2,500. President: Hon. John G. Winant. Executive Secretary: Alfred Willoughby. Headquarters: 299 Broadway, New York City. Publications: *National Municipal Review*, published monthly, and various books, pamphlets, and reports. Annual conference on government will be held in 1944 in observance of 50th anniversary of founding.

Museums, American Association of, founded in 1906 to help museums solve their problems and increase their usefulness. Membership: 1,100. President: Clark Wissler. Director: Laurence Vail Coleman. Headquarters: Smithsonian Institution, Washington, D.C. The Association has two major functions—long range work that shapes broadly the course of museum development, and direct and immediate usefulness to museums. The former program was advanced during 1943 through publication of a study entitled *Company Museums*, a book on museums of historical and technical record within business and industrial corporations. Company museums promise to develop rapidly after the war. This effort has been supported by a grant from the Carnegie Corporation of New York. The Association's program of direct service is being carried forward as usual through serial publications and consulting work. The Association publishes *The Museum News*, a bi-weekly paper devoted to news of the museum world, which completed its 20th volume in 1943.

Music Clubs, National Federation of, founded in 1898 for the purpose of "bringing into working relation with one another music clubs and other musical organizations and individuals directly or indirectly associated with musical activity for the purpose of aiding and encouraging musical education and developing and maintaining high musical standards throughout America." Membership: about 500,000 members in 5,000 clubs. President: Mrs. Guy Patterson Gannett. Secretary: Mrs. H. Carroll Day. Publications and Business Offices: 320 Wait Avenue, Ithaca, New York. The Federation starts its 1943-44 season with an intensified program of war service activity, having already supplied approximately three-quarters of a million records and 375,000 other articles of musical equipment to men in the armed forces. It is now engaged in equipping companies and battalions so that they can start hill-billy bands overseas, and is also carrying forward a nation-wide drive to secure records for men in isolated Arctic outposts. The Federation gave three partial scholarships to students at the Interlochen Music Camp during 1943. New committees on Music in Industry and Musical Therapy have been established. Liaison officers to cooperate more closely with the Music Teachers' National Association and the Music Educators National Conference have been appointed. Biennial Young Artists Auditions have been transferred to New York and three awards of \$1,000 each voted. A major prize of \$150 and several lesser prizes are offered for student compositions. An intensified program in support of American Composition involving systematic promotion of all the Federation's prize-winning compositions has been started. Clubs are competing for \$2,000 in war bonds offered by Donald Voorhes for the finest program aiding the war effort presented by a federated music club.

Music Council, Inc., National, organized April, 1940, to provide a forum for the discussion of problems affecting national musical life, to speak with one voice for music in the United States, to provide for an interchange of musical information, to encourage coordination of effort among musical organizations, to conduct surveys, to encourage the development of music and to foster the highest ethical standards in it. Membership: limited to nationally active musical associations, now numbers 40 such associations, with an individual membership of over 600,000. President: Edwin Hughes. Secretary: C. Albert Jacob, Jr. Headquarters: 338 West 89 Street, New York City. The Council publishes in its *Bulletin* digests of proposed national legislation affecting music, authoritative information on musical activities in the various departments and agencies of the Federal Government, government regulations concerning music, lists of musical contests and competitions, annual surveys of the programs of the major symphony orchestras of the United States, together with other surveys of national musical activities, information as to movements of various sorts which affect the national musical picture, and news of the activities of its member organizations. In 1943 it made for the U.S. Maritime Commission a survey on the use of music in the shipyards building vessels for the Commission and is aiding in the increase in general of the use of music in war industry plants; published a survey on State and Municipal Financial Support of Musical Activities; has published information on the Copyright Act as it affects music, and on the social security legislation introduced into the 78th Congress, 1st Session, as this proposed legislation affects the self-employed in the field of music. The Council is represented on the Music Advisory Committee of the Division of Cultural Relations in the State Department, and furnishes this committee with information as to the performance of Latin-American compositions by the major symphony orchestras of the United States. The annual meeting is held in May, and general sessions of the Council are called during each year as occasion demands.

Music Critics' Circles. See MUSIC.

National Guard Association of the United States, founded in 1878 to advance the interests of the National Guard, improve its armament, equipment, and training, for the greater security of the nation. Membership includes the entire complement of officers of the National Guard in each State and territory, totaling about 200,000. Presi-

dent: Maj. Gen. Ellard A. Walsh. Secretary: Brig. Gen. Fred M. Waterbury, 70 East 45 Street, New York City. **National Press Club.** See COORDINATOR OF INTER-AMERICAN AFFAIRS.

National Safety Council. See ACCIDENTS.

National War Fund. See separate article.

Nature Association, American, founded in 1922 to stimulate public interest in every phase of Nature and the out-of-doors, and to further the practical conservation of the great natural resources of America. Membership: 55,000. President: Arthur Newton Pack. Secretary: Richard W. Westwood. Headquarters: 1214 16th Street, N.W., Washington, D.C. Official organ of the Association is *Nature Magazine*.

Navy League of the United States, founded in 1902 with the object of acquiring and spreading before the citizens of the United States information as to the condition of the naval forces and equipment of the United States, and of awakening interest and cooperation in all matters tending to aid, improve, or develop their efficiency. President: Sheldon Clark. Secretary: E. M. Collins. Headquarters: The Mills Building, Washington, D.C. The Navy League sponsors a training program for the Abbott Hall Navy Officers School, Northwestern University, aboard a fleet of yachts volunteered by 100 Chicago yachtsmen; publishes the monthly magazine *Sea Power* to disseminate timely news and items of interest about the U.S. Navy; and through its local councils carries on community programs important to the Navy's welfare such as Wave recruiting, the housing of visiting relatives of sea-going enlisted personnel in crowded naval districts and organized recreational activities. As in past years, the League also sponsors Navy Day, celebrated throughout the nation. The annual meeting and the meetings of the Board of Directors are held in New York City.

Navy Relief Society, founded Jan. 23, 1904, to aid, in times of need, the officers and enlisted men of the Naval Service of the United States, and their dependents, and also the dependents of such deceased personnel. President: Admiral E. J. King, U.S. Navy. Executive Vice-President: Admiral J. O. Richardson, U.S. Navy (Ret.). Auxiliaries of the Society are established at 41 of the principal Naval Stations. Close cooperation with the American Red Cross permits the Society to aid families residing in areas not served by an auxiliary. In 1943 there was a steady increase in the activities of the Society due to the expansion of the Navy and the progress of the war. The annual meeting was held in Washington, D.C., in February, 1943.

Near East Foundation, an organization founded in February, 1930, for humanitarian and welfare activities in the countries of the Near East. Membership: 50,000. President: Cleveland E. Dodge. Executive Secretary: Edward C. Miller. Headquarters: 17 West 46 Street, New York City. The Foundation is actively engaged in war relief work in the Near East. From 1940 through September, 1943, it has collected a total of \$1,108,721. The beneficiaries of this money will be the unfortunate victims of the war in Greece, Syria, Cyprus, and the Lebanon.

Netherlands-America Foundation, Inc., of Holland House, founded in 1921 to deepen understanding and friendship between the Netherlands and the United States through educational and cultural channels. Membership: 125. President: Thomas J. Watson. Secretary: Harold de Wolf Fuller. Headquarters: 10 Rockefeller Plaza, New York City. The annual meeting is held the third Tuesday in January.

New Education Fellowship, founded in 1915 to promote the unity of teachers throughout the world interested in progressive education. Deputy-Chairman: J. A. Lauwerys, London University. Secretary: Miss Clare Soper, International Headquarters: 50 Gloucester Place, London, W. 1, England. In World War II the Fellowship has geared its activities to include (1) a book that will diagnose the effect of war upon children and young people; (2) a plan to call together from many countries experts to study the problem of diminishing, through education, the tensions and conflicts due to racial, cultural, and religious differences; and (3) studies and conferences on the theme "Religion-Science-Ethics" in an effort to discover some common standards, acceptable to all faiths, which may be taught in schools throughout the world.

Newspaper Association, American. See PAPER AND PULP.

Newspaper Publishers Association, American, founded in 1887 to foster and protect the interest of the newspaper publishing business. Membership: 606. President: Linwood I. Noyes. Secretary: Norman Chandler. Headquarters: 870 Lexington Avenue, New York City. The 1944 meeting will be held in New York City, April 25-27. See NEWSPAPERS.

Norwegian Relief, Inc., an American incorporation founded May 1, 1940, and directed by Americans for the sole purpose of alleviating distress in Norway. President: Dr. J. A. Aagaard. Executive Secretary: Orlando Ingvaldstad. Headquarters: 135 South La Salle Street, Chicago. Norwegian Relief, Inc., has collected \$857,904 from the date of its founding to Oct. 6, 1943.

Numismatic Society, The American, founded in 1858 for the collection, preservation, and study of coins, medals, and decorations of all countries. Membership: 417. Presi-

dent: Dr. Herbert E. Ives. Secretary and Curator: Sydney P. Noe. Headquarters: Museum at Broadway and 156 Street, New York City. A loan exhibition by members of the Numismatic Clubs of the Metropolitan Area was held in October, 1943. Meetings are held at the Museum on the second Saturday in January, April, and November.

Nurses' Association, American, founded in 1896 to promote the professional and educational advancement of nurses, to elevate the standard of nursing education, and to establish and maintain a code of ethics among nurses. Membership: 170,803. President: Julia C. Stimson, R.N. Secretary: Margaret K. Stack, R.N. Headquarters: 1790 Broadway, New York City. During 1943 the Association completed a study of nurses' professional registries and conducted a study of the status of men nurses. In cooperation with the National League of Nursing Education, the Association published a study of "Annual Salaries and Salary Increases and Allowances Paid to General Staff Nurses." Further, the Association established a clearing bureau on problems of state boards of nurse examiners.

Nutrition Foundation, Inc., The, organized in December, 1941, to develop and apply the science of nutrition as a basic science of public health. Membership: 30. Chairman of the Board: Karl T. Compton. President: George A. Sloan. Scientific Director: Charles Glen King. Executive Secretary: Ole Salthe. During 1943 the Foundation approved 84 applications to 41 leading universities. The Foundation publishes *Nutrition Reviews*, a monthly journal providing an unbiased review of the world's current research literature in the field of nutrition.

Odd Fellows, Independent Order of, a fraternal organization founded in 1819. Membership: 1,244,274. Grand Sire: J. Paul Kuhn. Grand Secretary: Edw. G. Ludvigsen. Headquarters: 16 West Chase Street, Baltimore, Md. The 1944 meeting will be held in Toronto, Canada.

Oriental Society, American, founded in 1842 for the promotion of research in oriental languages and cultures and the publication of books and papers. Membership: 870. President: Leonard Bloomfield. Secretary: Ferris J. Stephens, Yale University, New Haven, Conn.

Ornithologists' Union, The American, founded in 1883 for the advancement of ornithological science, publication of a journal and other works. Membership: about 1,800. President: James L. Peters. Secretary: Lawrence E. Hicks, Ohio State University, Columbus, Ohio. The 1943 meeting was held in New York City, October 20.

Ort, Women's American, a national organization, founded in 1927, as a constituent body of the American Ort Federation, which is part of the World Ort Union, whose purpose is the promotion of technical trades and agriculture among Jewry in vocational and technical trade schools, agricultural colonies, cooperatives and workshops. For over 60 years the Ort has trained the dislocated and the underprivileged to become integrated into the economic scheme of their native lands or in countries of refuge. Training schools and farms of the Ort continue to function in war-torn Europe today. Ort is laying the groundwork for postwar economic reconstruction of the Jews in Europe. Membership: about 12,000. President: Mrs. Edward B. Gresser. Headquarters: 212 Fifth Avenue, New York City. Events of 1943-44 include the annual membership tea, Nov. 17, 1943, in New York City, and the bi-annual convention on May 8-9, culminating in the annual donor luncheon on May 10, 1944, at the Hotel Astor. Chapter meetings are held monthly in the 45 chapters throughout cities in the United States.

Pacific Relations, Institute of, founded in 1925 to promote scientific study and discussion of the problems and interrelations of the peoples of the Pacific area. Composed of national councils in several countries bordering on or having interest in the Pacific Ocean. Chairman: Edgar J. Tarr, K.C. Secretary-General: Edward C. Carter. Publications: *Pacific Affairs*, quarterly, *Inquiry into the Sino-Japanese War* (25 volumes now issued) and other volumes. The chairman of the American Council of the Institute is Robert Gordon Sproul. Headquarters: 1 East 54 Street, New York City. Membership: 1,153. Publications: *Studies of the Pacific* (research series); *Far Eastern Survey*, fortnightly; popular pamphlets; basic texts on Far East for school use.

Pan American Foundation, founded in 1938 to promote and maintain, through nongovernmental means and agencies, the principles and policies of Pan Americanism. The foundation promotes the founding of a Pan American University, and assists and cooperates in the exchange of literary, artistic, musical, scientific, and medicinal accomplishments between the peoples of the Western Hemisphere. Director: A. Curtis Wilgus. Secretary: Michel A. Picard. Headquarters: 1217-Thirteenth Street, N.W., Washington, D.C.

Pan American Union. See separate article.

Pan American Women's Association, founded in 1930 to promote inter-American understanding through cultural interchange. President: Frances R. Grant. Secretary: Dolores Q. de Chadbourne. Headquarters: 45 West 45 Street, New York City. During 1943 the Association held its panel luncheons on the third Saturday of each month at the Town Hall Club, New York City, and continued its concerts, exhibitions, and special institutes on inter-American problems.

Parents and Teachers, the National Congress of (P.T.A.), founded in 1897 as the National Congress of Mothers, to promote the welfare of children and youth in home, school, church, and community. Membership: 2,612,345. President: Mrs. William A. Hastings. Director of Office: Ruth A. Bottomly. National Office: 600 South Michigan Boulevard, Chicago 5. Nation-wide projects: community school lunch, child welfare legislation, traffic safety education, annual radio series (family life education). The Congress conducts an extensive wartime program based on its regular long-range activities. Points of special emphasis are juvenile delinquency prevention, consumer education, adequate teacher salaries, maintenance of school standards, adequate care for children of working mothers. The official organ of the Congress is its monthly magazine, the *National Parent-Teacher*.

Parole Association, American. See PRISONS.

Peace, Commission to Study the Organization of, formed in November, 1931, to study the basic principles which must underlie the organization of a just and durable peace and to conduct a program of popular education in support of these principles. Membership: 115. Chairman: James T. Shotwell. Director: Clark M. Eichelberger. Headquarters: 8 West 40 Street, New York City. Prominent events in 1943 included a presentation of the third report on the United Nations and the organization of peace at a public meeting in New York City; a series of 13 radio programs dealing with international postwar issues under the title "For This We Fight"; a program of study by rural groups of postwar problems; and co-operation with the Church Peace Union and other groups in a series of Win the War—Win the Peace Institutes in principal cities.

Peace and Freedom, Women's International League for (U.S. Section), founded in 1915. Membership: 10,000. President: Mrs. Dorothy Medders Robinson. Secretary: Miss Dorothy Detzer. Headquarters: 1734 F Street N.W., Washington, D.C. Monthly publication: *Four Lights*.

Peace Conference, National, founded in 1933 with a three-fold purpose: as a council board, as a clearinghouse, as a publisher and service agency to provide nonpartisan information on international affairs. Membership: 38 national organizations. Executive Director: Jane Evans. Headquarters: 8 West 40 Street, New York City. The Conference holds monthly meeting of organizational leaders to discuss current problems, clarify issues, and plan programs. A study project is sponsored on world organization, which includes celebrating Armistice Day as World Government Day.

P.E.N. Club, a world association of writers, founded in 1922 in the interests of literature, freedom of artistic expression, and international goodwill. Membership (American Center): 335. President: Carl Carmer. Secretary: J. L. B. Williams. Headquarters: 16 East 96 Street, New York City. The International Federation of the P.E.N. Clubs is headed by a Presidential board, consisting of H. G. Wells, Dr. Hu Shih, Thornton Wilder, and Denis Saurat.

Pen Women, National League of American, founded in 1897 to promote the creative cultural arts of the pen, pencil, and brush. Membership: 3,100. President: Victoria Faber Stevenson. Headquarters: 409 Willard Hotel, Washington, D.C. If war conditions permit, the regular biennial convention of The League will be held in late spring of 1944, when desirable prizes are awarded in the several crafts, in national contests. The League publishes a monthly magazine, *The Official Bulletin*; editor, Winifred Willard.

People's Lobby, Inc., The, founded in 1931 (formerly the People's Reconstruction League, founded in 1920) to work for legislative and administrative measures in the interest of all the people. Membership: 3,490. President: Bishop Francis J. McConnell. Executive Secretary: Benjamin Marsh. Headquarters: 1410 H Street, N.W., Washington, D.C. During 1943 the organization distributed about a quarter of a million reprints of its material. It sought to popularize profitless defense and a pay-as-you-go policy for national defense.

Permanent Charity Fund, see PHILANTHROPY.

Petroleum Institute, American, founded in 1919 to afford a means of cooperation with the government, foster trade in petroleum products, promote the interests of the industry, the mutual improvement of its members, and the study of related arts and sciences. Membership: about 4,000. President: W. R. Boyd, Jr. Secretary: Lacey Walker. Headquarters: 50 West 50 Street, New York City.

Philatelic Society, American, an organization of stamp collectors, founded in 1886. Membership: 5,016. President: Donald F. Lybarger. Secretary: Dr. H. A. Davis. Headquarters: 3421 Colfax "A," Denver, Colo. The annual meeting, held in late summer, is scheduled for Milwaukee, Wis., 1944.

Philological Association, American, founded in 1869 for the advancement and diffusion of philological knowledge; incorporated, 1937. Membership: 1,050. President: Marbury B. Ogle. Secretary: L. R. Shero, Swarthmore College, Swarthmore, Pa.

Philosophical Association, The American, founded in 1900 for the promotion of the study and teaching of philosophy

in all branches. Membership: 840. Chairman: Donald S. Mackay. Secretary-Treasurer: Cornelius Kruse. Headquarters: Wesleyan University, Middletown, Connecticut. See PHILOSOPHY.

Physical Society, American, founded in 1899 for the advancement and diffusion of knowledge of physics. Membership: 4,300. President: Dr. A. W. Hull. Secretary: Dr. K. K. Darrow. Headquarters: Columbia University, New York City 27. The annual meeting was in January, 1943.

Physicians, American College of, founded in 1915 as an organization of qualified specialists in Internal Medicine and allied specialties to maintain and advance the highest possible standards in medical education, medical practice and clinical research, perpetuate the history and best traditions of medicine and medical ethics, and to maintain both the dignity and the efficiency of Internal Medicine in its relation to public welfare. Membership: 4 Masters, 3,881 Fellows, 1,109 Associates; total, 4,994. President: James E. Paullin. President-Elect: Ernest E. Irons. Executive Secretary: E. R. Loveland. Headquarters: 4200 Pine Street, Philadelphia 4. Due to the war, the annual sessions of the College have been abandoned, and in their place an extensive program of regional meetings, postgraduate courses, and wartime graduate medical conferences for medical officers in the armed forces have been organized and conducted in various parts of the United States and Canada. The customary research Fellowships and the John Phillips Memorial Award for Achievement in Internal Medicine have been discontinued for the duration of the war. Other activities of the organization, such as the investigation and certification of Internists, the publication of its journal, the *Annals of Internal Medicine*, have been continued. Approximately 30 per cent of the Fellows and Associates of the College have volunteered for service in the medical corps of the armed forces, and a large number of these are holding responsible commissions not only in the offices of the Surgeons General, but in the service of their country in far-flung fronts of the Allied forces.

Planned Parenthood Federation of America, Inc. (formerly Birth Control Federation of America, Inc.), formed in 1939 by the merger of the American Birth Control League (1921), and the Birth Control Clinical Research Bureau (1923) to foster Planned Parenthood by making birth control information available, under medical direction, through private physicians, hospital and public health clinics, and extra-mural clinics. Special emphasis is being given to medical service for women in war industries and to wives of men in the armed forces. Membership: about 34,000. Honorary Chairman: Margaret Sanger. President: J. H. J. Upham, M.D.; National Director: D. Kenneth Rose. Medical Director: O. C. Pierce, M.D.; Secretary: Mrs. Albert D. Lasker. Headquarters: 501 Madison Avenue, New York City. See BIRTH CONTROL.

Planning and Civic Association, American, formed in 1935 by a merger of the American Civic Association (1904) and the National Conference on City Planning (1909). It promotes public understanding and support of planning for the best use of land, water, and other natural resources, higher ideals of civic life, and safeguarding of natural wonders, scenic possessions, and recreation facilities. Membership and Subscriptions: 2,000. President: Horace M. Albright. Executive Secretary: Harlean James. Headquarters: 901 Union Trust Building, Washington, D.C. The Association publishes a yearbook, *American Planning and Civic Annual*; and the quarterly, *Planning and Civic Comment*.

Polish Institute of Arts and Sciences in America, founded in 1942 to establish permanent collaboration between Polish and American scholars, and to assure for the duration of the war the continuity of Polish research work. Membership: 45 active members; 37 corresponding members. President of the Board: Hon. Jan Kucharski. Director of the Institute: Prof. Oskar Halecki. Headquarters: 37 East 36 Street, New York City. Publications: *Bulletin*, published quarterly; *Polish Institute Series*. The Institute was inaugurated May 15, 1942. October saw the foundation of the Canadian branch in Montreal. On May 11 and 12, 1943, a Conference was held in Pittsburgh. Each of the five sections of the Institute (historical and political sciences, history of literature and of arts, law and social and economic sciences, pure and applied sciences, and educational problems) is organizing lectures of Polish and American scholars to be held at the headquarters of the Institute at least once a month throughout 1943-44. Special conferences on the nutritional reconstruction of Poland, on the history of East Central Europe, and on the role of the universities in the postwar world were organized in 1943.

Polish National Alliance of the U.S. of N.A., a fraternal society founded in 1880. Membership: 300,000. President: I. K. Rozmarek. General Secretary: A. S. Szczerbowski. Headquarters: 1514-20 W. Division Street, Chicago. A convention is held once every four years, and the subsidiary lodges, which number about 2,000, meet monthly.

Political and Social Science, The American Academy of, founded in 1889 to provide a forum for the discussion

of the great political, social, and industrial problems confronting the world. Membership: 9,000. President: Dr. Ernest Minor Patterson. Secretary: Dr. J. P. Lichtenberger. Headquarters: 3457 Walnut Street, Philadelphia. A bi-monthly, *The Annals*, is published. The 1944 annual meeting is scheduled for Philadelphia, April 14, 15.

Political Science, Academy of, an international learned society founded in 1880, incorporated, 1910. Membership: 7,075. President: Lewis W. Douglas, Editor of Publications: John A. Krout, Secretary: Noel T. Dowling. Headquarters: Fayerweather Hall, Columbia University, New York City. At the semi-annual meeting, April 7, 1943, in New York City, "Mobilization of Manpower and Pressing the Fight for Freedom" was the paramount issue discussed. At the 63rd annual meeting on November 10, the topic considered was "The Problems of Total War—Economic, Civil, and Military."

Political Science Association, American, founded in 1903 to foster scholarly interest in the scientific study and improvement of politics and public law, administration, and diplomacy. Membership: 2,975. President: Robert E. Cushman. Secretary: Kenneth Colegrove. Headquarters: 1822 Sheridan Road, Northwestern University, Evanston, Ill. The Association maintains a Personnel Service indicating the records of young scholars available for appointment. The annual meeting was in Washington, D.C., January 29–31, 1943.

Prevention of Blindness, Inc., National Society for the, founded in 1915, concerned with the control and, where possible, the elimination of the causes of blindness, impaired vision, and eyestrain—not with activities on behalf of those already blind. Members and Donors: 25,000. President: Mason H. Bigelow. Executive Director: Mrs. Eleanor Brown Merrill. Secretary: Miss Regina E. Schneider. Headquarters: 1790 Broadway, New York City 19.

Prevention of Cruelty to Animals, The American Society for the (A.S.P.C.A.), founded in 1866. President: Alexander S. Webb. Vice-President-Secretary: Richard Welling. Executive Vice-President: Sydney H. Coleman. Headquarters: 50 Madison Avenue, New York City. The Society maintains a shelter in each borough of New York City, in which it housed 242,803 animals in 1943. Its animal hospital at Avenue A and 24 Street, Manhattan, treats over 20,000 cases a year. An educational program is developed for the schools and for adults. The annual meeting was held Jan. 7, 1943.

Prison Association, American, founded in 1870 to improve laws, law enforcement, and penal and correctional institutions, to study the causes of crime, and to care for and provide employment for paroled and discharged prisoners and probationers. The Association maintains a free clearinghouse of information. Membership: 890. General Secretary: E. R. Cass. Headquarters: 135 East 15 Street, New York City. The Annual Congress, may be attended by anyone who wishes to profit thereby.

Probation Association, National. See JUVENILE DELINQUENCY.

Progressive Education Association, incorporated in 1931 to develop and promote progressive principles of education through field conferences, a Service Center for members, preparation and distribution of educational materials, and publication of two journals, *Progressive Education* and *Frontiers of Democracy*. Membership: about 10,000. Director: Vinal H. Tibbatts. Headquarters: 221 West 57 Street, New York City 19.

Protection of Foreign Born, American Committee for, founded in 1933 to promote better relations between native and foreign born by education; to combat discrimination on the ground of race, nationality, or noncitizenship; to encourage and facilitate naturalization; and to prevent the destruction of American families by deportation. It is not a membership organization, but has 400 annual contributors. Chairman: Hugh DeLacy. Headquarters: 2 West 43 Street, New York City.

Psychiatric Association, American, founded in 1844 to further the study of mental diseases; to further psychiatric hospitals, education, and research, and to apply psychiatric knowledge to other branches of medicine, to other associations, and public welfare. Membership: 3,128. President: Dr. Edward A. Strecker. Executive Assistant: Austin M. Davies. Headquarters: 9 Rockefeller Plaza, New York City. The 1944 meeting was scheduled for Philadelphia, May 15–18. See PSYCHIATRY.

Psychical Research, Inc., American Society for, incorporated in 1904 for the scientific investigation of all types of psychical phenomena. Membership: 500. President: Dr. George H. Hyslop. Secretary: Mrs. Richard L. Kennedy, Jr. Headquarters: 40 East 34 Street, New York City 16.

Psychological Association, American, founded in 1892 to advance psychology as a science. Membership: 8,825. President: Gardner Murphy. Secretary: Willard C. Olson. Headquarters: University of Michigan, Ann Arbor, Mich.

Psychology, American Association for Applied, listed under Applied.

Public Administration, Institute of, founded in 1906 as The Bureau of Municipal Research. The Institute's purpose is to improve the management and operation of American government through the scientific study of

public administration, the development of practical ideas and improved procedures in government administration, dissemination of the results of such research to public officials and to citizens generally, and the advancement of training for the public service. Membership: 12. Chairman: Richard S. Childs. Director: Luther Gulick. Headquarters: 261 Broadway, New York City.

Public Administration Clearing House, founded in 1931 to serve as an exchange for information concerning administrative processes and problems in government, and to foster cooperation among organizations of operating officials, research units, technical experts, and others in the field of public administration. Acting Chairman of Board of Trustees: Ralph Budd. Director: Louis Brownlow. Headquarters: 1313 East 60 Street, Chicago.

Public Affairs Committee, Inc., founded in 1936 to make available in summary and inexpensive form the results of research on economic and social problems to aid in the understanding and development of American policy. Chairman: Ordway Tead. Secretary: S. M. Keeny. Headquarters: 30 Rockefeller Plaza, New York City 20. In their fifth million, there are more than 50 current *Public Affairs Pamphlet* titles.

Public Affairs, Institute of, founded in 1927 to examine and publicize by formal addresses and open-forum discussions important national and international problems. Public sessions from one to two weeks, usually in July. Membership and attendance: 3,000 yearly; 39,000 total. Acting Director: Oron James Hale. Secretary: Mary H. Spalding. Headquarters: University of Virginia, Charlottesville, Virginia. Emphasizes student participation through representatives of principal Eastern and Southern colleges. The program of the last (1942) sessions was built around the theme, "New Strategies for War and Peace." The Institute has been suspended for the duration of the war.

Public Health Association, American, founded in 1872 to promote and protect public and personal health. Membership: 8,300. President: Dr. Felix J. Underwood. Executive Secretary: Dr. Reginald M. Atwater. Headquarters: 1790 Broadway, New York City. During 1943, the Association through its project on Merit Systems rendered service to eight states and one city in supplying examination items for public health nurses, health officers, and laboratory workers. It distributed its reports on Standard Methods for the Examination of Water and Sewage, and of Dairy Products, Diagnostic Procedures and Reagents, Swimming Pools and Other Bathing Places, and on professional qualifications of several types of public health workers. Its committee on the Hygiene of Housing developed an appraisal form for use in selecting those houses which should be replaced for health reasons. Four active subcommittees were at work on postwar housing problems. The Committee on Administrative Practice conducted studies of state health administration, advanced its investigations and recommendations with regard to local health units, and compiled and published a range of indices of health experiences and practices for a group of 154 communities. The Sedgwick Memorial Medal for distinguished service in public health was awarded to Brig. Gen. James S. Simons. Thirty-three cities and counties were placed on the National Health Honor Roll for the year 1942, and 10 city and rural areas were cited on the Health Honor Roll for Canada. The emphases of the Honor Roll for 1943 have been refocused on wartime health services, including industrial hygiene, housing, control of venereal diseases. Two new Sections were established in the Association, on School Health and on Public Health Dentistry. The official publication of the Association is the *American Journal of Public Health*, now in its 34th volume.

Publishers' Information Bureau. See MAGAZINES.

Queen Wilhelmina Fund, Inc., founded in May, 1940, to distribute medical aid, food, and clothing to and otherwise promote the well-being of the population of the Netherlands and its refugees and stranded citizens in other countries. Membership: 16. Headquarters: 400 Madison Avenue, New York City. The 1943 meeting was held in New York.

Radio Relay League, Inc., American, a noncommercial association of radio amateurs, founded in May, 1914, and bonded for the promotion of interest in amateur radio communication and experimentation, relaying of messages, advancement of the radio art, maintenance of fraternalism and high standard of conduct. Membership: 28,124. President: George W. Bailey. Headquarters: West Hartford, Connecticut. Activities of the League in 1943 included the preparation of radio amateurs for national defense, and contribution to the war effort through recruiting articles in the official magazine *QST*. A meeting will probably be held at the League's headquarters during the first week in May, 1944.

Railroads, Association of American, founded in 1934 to promote trade and commerce in the public interest, further improve railroad service, and maintain the integrity and credit of the railroad industry where concert of policy and action are required. Membership: 136 railroad systems and 175 associate members. President: J. J. Felley. Secretary-Treasurer: H. J. Forster. Headquarters:

Transportation Building, Washington, D.C. See RAILWAYS.

Recreation Association, National, founded in 1906 with the following objectives: That every child in America shall have a chance to play; that everybody in America, young or old, shall have an opportunity to find the best and most satisfying use of leisure time. Membership: 10,000. President: Howard Braucher. Headquarters: 315 Fourth Avenue, New York City. From the beginning of the war the Association adapted its services to assist governments—local and national—with the recreation problems of men in uniform, war industry workers, and civilians.

Refugees Relief Trustees. See NATIONAL WAR FUND.

Religious Education, International Council of, founded in 1922 to promote Sunday School work, to encourage the study of the Bible, and to assist in the spread of the Christian religion. Membership: 42 Protestant denominations, 31 state councils of religious education, 65 city councils, and 800 county councils. President: Harold E. Stassen. Secretary: Roy G. Ross. In 1943 the Council held a conference on wartime responsibilities and policies, sponsored 100 regional conferences on education for postwar world, prepared new Sunday School lesson outlines for use by member denominations, and supervised leadership activities for approximately 50,000 local church leaders and teachers. The annual meeting is scheduled for Feb. 7-12, 1944, in Chicago.

Rescue and Relief Committee, Inc., International, founded in February, 1942, by a merger of the Emergency Rescue Committee with the International Relief Association, and dedicated to the rescue and relief of anti-fascist refugees in Europe. Membership: 10 executive board members. Chairman: Dr. Frank Kingdon. Executive Secretary: Sheba Strunsky. Headquarters: 2 West 43 Street, New York City. Meetings are held bimonthly or as necessary.

Research Council, National, founded in 1916 to "promote research in the mathematical, physical, and biological sciences, and in the application of these sciences to engineering, agriculture, medicine, and other useful arts, with the object of increasing knowledge, of strengthening the national defense, and of contributing in other ways to the public welfare." Membership: about 220, composed in majority of representatives of 85 scientific and technical societies; in addition to about 1,800 members of committees of the Council and its Divisions. Chairman: Ross G. Harrison. Executive Secretary: W. H. Kenerson. Headquarters: 2101 Constitution Avenue, Washington, D.C. The Council conducts a wide range of research activities in the medical and natural sciences under the sponsorship or supervision of specially appointed committees. Series of post-doctorate fellowships are administered in the medical and in the natural sciences. A number of publications resulting from work of the Council's Committees are issued each year, either commercially or in the *Bulletin* or *Reprint and Circular Series* of the Council. As an operating agency of the National Academy of Sciences, the Council is called upon frequently by agencies of the Government for advice and assistance in connection with many problems of research relating to the war effort.

Research Council of Canada, National, founded in 1916 to have charge of all matters affecting scientific and industrial research in Canada which may be assigned to it by the Committee of the Privy Council on Scientific and Industrial Research. Membership: 15. President: Lt. Gen. A. G. L. McNaughton (recalled to active duty). Acting President: C. J. Mackenzie. Secretary: S. P. Eagleson. Headquarters: National Research Building, Ottawa, Canada. The Council's staff of 1,205 in October, 1943, was grouped in laboratory divisions of applied biology, chemistry, mechanical engineering, physics and electrical engineering and a section on research plans which includes a scientific library and technical information service. Practically all activities were directed to war research for Navy, Army, and Air Force for which the Council is official research station. Prototypes of important tactical weapons designed by the Council are now in successful operational use. Outside activities included a research program of more than 70 war projects in universities; the granting of 65 scholarships for postgraduate research, and the award of 197 grants in aid to responsible workers for special investigations.

Review of Motion Pictures, Inc., National Board of, an organization founded in 1909 to encourage the best uses of the motion picture recreationally, educationally, and artistically. Membership: 500. President: Quincy Howe. Executive Director: James Shelley Hamilton. Headquarters: 70 Fifth Avenue, New York City. The 18th annual announcement of the Board's choices for the best films of the year was made in December, 1943. In order of preference, they were: *The Ox-Bow Incident*, *Watch on the Rhine*, *Air Force*, *Holy Matrimony*, *The Hard Way*, *Casablanca*, *Lassie Come Home*, *Bataan*, *The Moon Is Down*, *Next of Kin*. Documentary films selected for the same year, in order of preference, were: *Desert Victory*, *Battle of Russia*, *Prelude to War*, *Saludos Amigos*, *Silent Village*.

Reynolds Foundation, see PHILANTHROPY.

Rosenwald Fund, see PHILANTHROPY.

Rotary International is the world-wide organization of all Rotary clubs. It is responsible for the administrative supervision of its member clubs and for the propagation of the objects of Rotary throughout the world. A Rotary club is a group of representative men, one from each business or profession in a community, who meet together in fellowship to further the "Ideal of Service" (thoughtfulness of and helpfulness to others) in business and community life. The first Rotary club was organized in Chicago in 1905. There are now 5,201 Rotary clubs in more than 50 countries of the world with a membership in excess of 210,000. President: Charles L. Wheeler. Secretary: Philip Lovejoy. Headquarters: Chicago, Illinois—additional offices in London, England; Zurich, Switzerland; and Bombay, India. The official Rotary magazine is *The Rotarian*, which has a Spanish edition, *Revista Rotaria*. There are also numerous regional Rotary magazines published throughout the world in several different languages.

During 1943 Rotary activities included general community betterment undertakings, work for crippled children and underprivileged children, the establishment and supervision of camps and clubs for boys and girls, assistance to students through scholarships and student loan funds, the promotion of high ethical standards in businesses and professions, and the development of international good will and understanding. In addition, Rotary clubs actively cooperated with their governments in rationing, salvaging, and fund-raising campaigns, and in all phases of civilian defense, and engaged in activities for the alleviation of war suffering. In the United States and Canada 207 Institutes of International Understanding were sponsored by Rotary clubs, presenting to community forums and to high school audiences outstanding speakers on vital world problems. The 34th annual convention of Rotary International was held in St. Louis, Mo., May 17-20, 1943. Rotary clubs are especially interested in the problems of the postwar world and for the last three years Rotary International has had a special committee to study these problems. Principal activity of this committee in 1943 was the development of the "Work Pile" idea of cataloguing postwar work now planned by individuals and organizations so as to assure adequate work for demobilized service men and war workers.

Royal Geographical Society, listed under *Geographical*. **Royal Institution of Great Britain**, founded in 1789 for the promotion, diffusion, and extension of science and useful knowledge. Membership: about 800. President: The Right Hon. Lord Eustace Percy. Secretary: Maj. Charles E. S. Phillips. Headquarters: 21 Albemarle Street, London, W. 1.

Royal Society, founded in 1662 for improving natural knowledge. Membership: 460 Fellows and 45 Foreign Members. President: Sir Henry Dala, Treasurer: T. R. Merton. Secretaries: Prof. A. V. Hill and Sir Alfred Egerton. Foreign Secretary: Sir Henry Tizard. Assistant Secretary: John D. Griffith Davies. Headquarters: Burlington House, London, W. 1, England. Awards were made during 1943 as follows: Copley Medal to Sir Joseph Barcroft; Royal Medals to Sir Harold Spencer Jones and Dr. E. B. Bailey; Davy Medal to Prof. I. M. Heilbron; Sylvester Medal to Prof. J. E. Littlewood; Hughes Medal to Prof. M. L. E. Oliphant. The Croonian Lecture was delivered by Sir Edward Mellanby on July 15, 1943, and the Bakerian Lecture by Dr. R. V. Southwell on June 17, 1943. Five Ordinary Meetings were held during the year. The Anniversary Meeting was held Nov. 30, 1943.

Russell Sage Foundation, see PHILANTHROPY.

Russian War Relief, Inc., founded in September, 1941, to furnish relief aid for the Russian people, ships medical supplies, clothing, and seeds to the U.S.S.R. Membership: 45 Board of Directors. President of the Board: Edward O. Carter. Secretary: Allen Wardwell. Headquarters: 11 East 35 Street, New York City. Russian War Relief, Inc., now functions under President Roosevelt's War Relief Control Board No. 547. See WAR FUND, NATIONAL.

Safety Council, National, founded in 1913 to bring about understanding of the steps necessary to prevent accidents of all kinds and to furnish its members with printed material and information for use in conducting accident prevention work. Membership: 6,036, mainly companies and associations. President: Col. John Stillwell. Executive Vice President and Managing Director: Ned H. Dearborn. Headquarters: 20 N. Wacker Drive, Chicago. The prevention of accidents as an aid to defense has been stressed by the Council since 1941. On Aug. 13, 1941, President Roosevelt issued a proclamation calling attention to the increased accidental death rates. Declaring that, "Accidents hinder national defense," he called upon the National Safety Council to mobilize its nation-wide resources in leading a concerted campaign against accidents, and upon every citizen to enlist in this campaign. The Council called together 130 national associations to cooperate in this campaign. It intensified its own activities in traffic and industrial safety. Special publications, films, and posters were produced and special studies

made on several aspects of traffic and industrial safety as they are affected by and as they affect the war effort. The Council published 8 magazines and hundreds of studies on accident prevention methods. It distributed over 6 million safety posters in 1943 for use in industry, in schools, and public places. It conducted many national safety contests among various groups and issued hundreds of awards. The National Safety Congress, attended by several thousands of delegates, meets annually in October. See ACCIDENTS.

Save the Children Federation, Inc., founded in 1932 as an organization for rural community child service in America and cooperation overseas with Save the Children International Union and affiliates. Chairman: Guy Emery Shipley. Executive Director: John R. Voris. Treasurer: John Q. Tilson. Overseas activities in 1943 were centered chiefly in the United Kingdom, cooperating with the Save the Children Fund of Great Britain in nursery support and wartime supplemental aid to children. In the United States the Children's Clothing Crusade in public schools was foremost, with a goal of 1,500,000 pounds. The total benefits—cash and commodities—collected in 1942 was \$1,135,343.

Savings and Loan League, United States, a trade organization founded in 1892 by the savings, building and loan associations and cooperative banks of the United States, whose assets total \$6,500,000,000 and whose chief business is the lending of money to finance home ownership. Membership: 3,700 associations and 47 affiliated State leagues. President: Ralph H. Calk. Executive Vice President: Morton Bodfish. Headquarters: 221 North La Salle Street, Chicago. The organization sponsored in 1943 a state-by-state drive for associations to invest in Government bonds and has brought their total of such investments up to some \$750,000,000. A Postwar Savings and Loan Program Committee was organized, and assembled material looking toward adaptation of home financing to public postwar needs. The League published the 13th of its series of year books, *Savings and Loan Annals 1942*.

Scandinavian Foundation, American, founded in 1911 to assist cultural relations between America and the Scandinavian countries. President: Henry Goddard Leach. Headquarters: 116 East 64 Street, New York City.

Science, American and British Associations for the Advancement of, listed under *Advancement*.

Sculpture Society, National, organized in 1893, to advance the knowledge, creation and appreciation of good sculpture. The Society cooperates in planning competitions and administers a trust fund which provides loans for sculptors in need. Membership: about 300. President: Edmond Amateis. Secretary: Cornelia Van A. Chapin. Headquarters: 115 East 40 Street, New York City. The Lindsey Morris Memorial Prize for 1943 was awarded to Janet de Caux for her Relief, *Go to the Ant, Consider her Ways and Be Wise Thou Sluggard*. During the year the Society circulated two traveling exhibitions of enlarged photographs: *Ecclesiastical Sculpture and American Patriots*. See ART under *Sculpture*.

Seamen's Service, Inc., United, founded Sept. 1, 1942, to provide for merchant seamen rest centers, residential and recreation clubs, personal service, and any other aids deemed necessary to promote the health, morale, and general welfare of officers and men of the merchant marine both in the United States and abroad. Chairman of the Board: Admiral Emory S. Land. President: Henry J. Kaiser. Secretary: Mrs. Lewis W. Douglas. National Executive Director: Douglas P. Falconer. Headquarters: 39 Broadway, New York City 6. On Oct. 15, 1943, USS had in operation in the United States, 5 rest centers for torpedoed seamen and for those in need of rest as a result of tension of wartime sea duty; 10 port medical offices, as well as 15 residential clubs, and 11 recreation centers, while abroad, 25 residential clubs had been established. Its overseas operations are geared to provide services for seamen as allied forces move into enemy territory. The annual meeting of the board will be held in New York City, Apr. 6, 1944.

Seeing Eye, Inc., The, a philanthropic association founded in 1929 for the purpose of supplying blind persons with dogs trained to act as guides; training and teaching instructors in the science and technique of educating dogs as guides; and educating and training blind persons in the proper use and handling of these dogs. The association trains 150 students annually, and there are now 800 blind men and women using Seeing Eye dog guides. Founder and Honorary President: Mrs. Dorothy H. Eustis. President: Henry A. Colgate. Headquarters: Morristown, New Jersey. The Seeing Eye, Inc. is supported by annual memberships and contributions. The maximum cost to a blind person is \$150, although the actual cost to The Seeing Eye is many times that amount. Seeing Eye dogs are now supplied without cost to eligible members of the armed forces who lose their sight in the line of duty.

Sheet Metal Contractors National Association. See HEATING AND VENTILATING.

Shipping, American Bureau of. See SHIPPING.

Sloan Foundation, see PHILANTHROPY.

Small Business Men's Association, Inc., National, founded November, 1937, as a nonpartisan, nonprofit organization

to give small business men an effective voice in national affairs, to protect and advance the American system of free, private enterprise under the Constitution, and to promote the general welfare by collecting and distributing information and data affecting the financial, commercial, civic, and industrial interests of its members and the nation. President: DeWitt Emery. Secretary: James S. Westbrook. Headquarters: 163 North Union Street, Akron, Ohio.

Social Hygiene Association, American, formed in 1914 to combat syphilis and gonorrhea, to fight prostitution and other unwholesome conditions, to promote sound sex education and training for marriage and parenthood, and to protect and improve the American family as the basic social institution. Membership: 150 organizations, approximately 18,000 individuals. President: Dr. Ray Lyman Wilbur. Executive Director: Dr. Walter Clarke. Headquarters: 1790 Broadway, New York City. Services include advice and consultation; surveys, production, and distribution of literature, films, and other materials. During 1943 the 7th National Social Hygiene Day was sponsored, and was marked by more than 5,000 meetings throughout the country. The William Freeman Snow medal for distinguished service in the social hygiene field was presented to Dr. Ray Lyman Wilbur, President of the Association and Chancellor of Stanford University at the Association's annual meeting in Buffalo. See FEDERAL SECURITY AGENCY.

Social Protection, Committee on. See FEDERAL SECURITY AGENCY.

Social Science, Henry George School of, listed under *Henry George*.

Social Science Research Council, organized in 1923 to promote the development of the social sciences. Membership: 29 elected representatives and members-at-large. Chairman: Edwin G. Nourse. Secretary: Roy F. Nichols. Treasurer: Shelby M. Harrison. Headquarters: 230 Park Avenue, New York City. During 1943 awards were made of 8 postdoctoral training fellowships, 7 predoctoral field training fellowships, and 24 grants-in-aid of research.

Social Security, American Association for, founded in 1927 by Abraham Epstein for the promotion of social security and social insurance in the United States. Membership: 4,000. President: Bishop Francis J. McConnell. Acting Executive Secretary: Adele Bloom. Headquarters: 22 East 17 Street, New York City. During 1943 the Association continued its fight for an improved unemployment insurance system and the inauguration of health insurance in the different States. The Association published the pamphlet *Experience Rating Versus Social Security*, and analyses of the Beveridge Report, and National Resources Planning Board Report.

Social Work, National Conference of, founded in 1873 to facilitate discussion of the problems and methods of practical human improvement, to increase the efficiency of organizations devoted to this cause, and to disseminate information. Membership: 6,000. President: Elizabeth Wisner. General Secretary: Howard R. Knight. Headquarters: 82 N. High Street, Columbus, Ohio.

Social Workers, American Association of, founded in 1921 to formulate and establish standards of personnel and of conditions under which social work is practiced, to seek to establish satisfactory conditions for the organization and administration of social services, to encourage through its membership requirements proper and adequate basic preparation and training for social work practice, to disseminate information concerning the profession, and to conduct investigations which contribute to an understanding of social welfare needs. Membership: 11,000. President: Grace Coyle. Executive Secretary: Joseph P. Anderson. Headquarters: 130 East 22 Street, New York City 10.

Sociological Society, The American, founded in 1905 to encourage sociological research, discussion, teaching, and publication. Membership: 1,017. President: George A. Lundberg. Secretary: Conrad Taeuber. Headquarters: U.S. Department of Agriculture, Washington 25, D.C. The Society issues the bimonthly journal, the *American Sociological Review*.

Special Libraries Association, founded in 1909 to further the purpose of special libraries in business and industrial organizations, and to promote the collection, organization, and dissemination of information in specialized fields; to develop usefulness and efficiency of special libraries and other research organizations; and to encourage the professional welfare of its members. Membership: 3,000. President: Eleanor S. Cavanaugh. Secretary: Kathleen B. Stebbins. Headquarters: 81 East 10 Street, New York City. Publications: *Special Libraries*, published monthly from September to April, with bimonthly issues from May to August; sponsored periodical, *Technical Book Review Index*, issued ten times a year, September to June. *Special Library Resources*, vol. 1, was published in 1941, with three additional volumes planned for late 1943 publication. Other recent publications are: *War Subject Headings for Information Files*; *Index to American Petroleum Statistics*, and *An Aeronautical Reference Library*. An annual convention is held each year, usually in June.

Spelman Fund, see **PHILANTHROPY**.

Standards Association, American, a federation of national groups dealing with standardization, founded in 1918. Membership: 77 trade associations, technical societies, and government departments and some 2,000 industrial concerns, who hold membership directly or by group arrangement. President: R. E. Zimmerman. Secretary: P. G. Agnew. Headquarters: 29 West 39 Street, New York City. The number of standards approved by the Association emergency procedure for American War Standards, greatly increased during 1943. Many of these were undertaken at the request of Government agencies such as OPA and WPB and the armed services. Because there has been an extremely high accident rate in war plants, the safety standards have become increasingly important. Many American War Standards are concerned with the conservation of production facilities, materials, and shipping space. The A.S.A. has approved specifications for military radio equipment, for protective lighting in industrial plants, and has drawn up specifications for women's industrial clothing as well as protective occupational clothing for both men and women. Some of the other war work has included specifications for ceramic radio insulating materials, power and audio transformers and reactors, glass-bonded mica radio insulators, as well as a group of standards that will help to control the quality of mass produced equipment such as the parts of guns and tanks. The A.S.A., in addition to its regular peacetime work, approved 38 war standards. All aim ultimately at developing greater national efficiency and increasing war production.

State Governments, The Council of, a joint governmental agency established in 1935 by the states as an outgrowth of the American Legislators' Association to serve as a clearinghouse of information for public officials, to encourage cooperation among the states and between the states and the Federal Government, and to make state government more effective. President: Hon. Leverett Saltonstall. Executive Director: Frank Bane. Headquarters: 1313 East 60 Street, Chicago. The Council has cooperated with federal and state governments in resolving many problems of a war and postwar nature including civilian defense, rationing, transportation, finance and intergovernmental fiscal relations, crime control, juvenile delinquency, interstate trade barriers, public welfare, conservation of natural resources, postwar planning, unemployment, education, and others. The Council is also the secretariat of the Governors' Conference, the American Legislators' Association, the National Association of Attorneys General, the National Association of Secretaries of State. Membership: 48 states.

Statistical Association, American, founded in 1839 as a scientific and educational organization of persons seriously interested in the application of statistical methods to practical problems, the development of more useful methods, and the improvement of basic statistical data. Membership: 3,200. President: E. A. Goldenweiser. Secretary: Lester S. Kellogg. Headquarters: 1603 K Street, N.W., Washington 6, D.C.

Statistical Institute, Inter American, founded May 12, 1941, to foster statistical development in the Western Hemisphere. Individual members: Constituent, 59; ex officio, 24; institutional members: Adhering governments, 9 (Dominican Republic, Bolivia, Mexico, Costa Rica, United States, Brazil, Peru, Panama, Canada); affiliated organizations, 2; special affiliates, 4. President of the Executive Committee: M. A. Teixeira de Freitas. Headquarters: Washington, D.C. Statutory conditions relative to financial and other support had been met by July 1, 1942, at which time the Institute commenced its first fiscal year of autonomous operation. Project activities are channeled through five standing committees, distributed through the hemisphere, in the field of current publications, inter-American statistical yearbook, statistical education, demographic statistics, and project review. Work is now under way in all of these committees. The quarterly professional journal, *Estadística*, the first number of which appeared in March, 1943, is published in Mexico.

Student Assembly, United States, formed Sept. 5, 1943, to train students in active citizenship to work with labor unions, cooperatives, and other progressive forces on the community level; to work against racial discrimination; and to make students keenly aware of international responsibilities. Membership: 2,500. President: Mary Louise Rogers. General Secretary: Irene Murray. Headquarters: 8 West 40 Street, New York City. Outstanding activities in 1943 were the following meetings: Institute on Economic Stabilization, Washington, D.C., March 18-20; First National Conference, New York City, May 7-9; Institute on National Resources Planning Board Report, New York City, June 12; Rally on Race Relations, New York City, July 19; Commemoration of International Students Day; Conference on Postwar Europe, New York City, December 18-20. A regional conference was held in Durham, N.C., in January, 1944, and the Second National Conference in New York City, March, 1944.

Sunday-School Union, American, founded in 1817 and renamed in 1824 to establish and maintain Sunday schools and to publish and circulate moral and religious publications. Thirty-six laymen constitute the Board of Managers.

President: Dr. E. Clarence Miller. Secretary and Treasurer: John H. Talley. Headquarters: 1816 Chestnut Street, Philadelphia, Pa. The Daily Vacation Bible School work was successfully continued in 1943, and growth was reported in young people's Bible conferences.

Surgeons, American College of, founded by surgeons of the United States and Canada in 1913 to advance the science and the ethical and competent practice of surgery, to establish hospital standards, to engage in research, to aid in better instruction of doctors, to formulate standards of medicine, and to improve all adverse conditions surrounding the ill and injured wherever found. Membership: 13,300. President: W. Edward Gallie. Secretary: Frederic A. Besley. Chairman of the Board of Regents: Irvin Abell. Headquarters: 40 East Erie Street, Chicago. Twenty sectional war sessions were held in 1943. The last annual meeting and clinical congress were held at Boston, Nov. 3-7, 1941. Work was carried on by the following departments: Hospital Standardization, Clinical Research, Library and Department of Literary Research, Medical Motion Pictures, and Graduate Training for Surgery.

Swedish Historical Museum, American, established in 1926 to promote good citizenship and patriotic purposes among citizens of Swedish origin, and preserve their contributions to American life. Membership: 2,000. Chairman of Board: William L. Batt. Executive Secretary: Elizabeth Z. Swenson. Headquarters: 19 Street and Pattison Avenue, Philadelphia. Events of 1943 included exhibits: "Sweden's Defense in Pictures"; large collection of etchings by Anders Zorn; rare old Swedish and Norwegian silver; contemporary Swedish china; lithographs by Ernst Norlind; oils and water-colors—"Native Types of Latin America" by Nils von Dardel; Swedish Spring Fete, at which time was celebrated the 300th anniversary of the coming of Governor Johan Printz to Tinicum Island and the establishment of sovereignty in Pennsylvania; Lucia Fest; receptions to exhibitors and distinguished guests; addresses. The Museum is also custodian of "The House on Queen Christina's Land-Grant," one of Philadelphia's oldest houses.

Tax Association, National, founded in 1907 to promote the discussion and dissemination of educational and scientific information on tax questions. Membership: 1,225. President: Walter G. Query. Secretary: Raymond E. Manning. Headquarters: % Library of Congress, Washington, D.C.

Tax Foundation, Inc., founded in 1938 to administer funds for the furtherance of science in taxation, efficiency in public administration, and economy in public finance; to collect data, make studies, conduct surveys, research projects, and demonstrations; to publish periodicals and issue other literature; and to further public understanding germane to these premises. Chairman: Lewis H. Brown. Executive Director: Charles C. Bauer. Headquarters: Room 1420, 30 Rockefeller Plaza, New York City.

Tax Institute, founded in December, 1932, to serve as a national citizens bureau of tax information. Membership: 1,100. President: Mark Eisner. Executive Director: Mabel L. Walker. Headquarters: 257 Fourth Avenue, New York City 10. Events of 1943 included the publication of symposium addresses, publication of monthly issues of *Tax Policy*, and semi-monthly issues of *Taxes for Democracy*, conduct of information service, and conduct of a forum on "Can We Raise \$10 Billion in New Taxes in 1944?"

Temperance Groups. See under *Alcoholism*, *Anti-Saloon League*, *Woman's Christian Temperance Union*.

Testing Materials, American Society for, a technical Society founded in 1898 to promote knowledge of the materials of engineering and to standardize specifications and methods of testing. Membership: 5,000. President: Dean Harvey. Secretary-Treasurer: O. L. Warwick. Headquarters: 260 South Broad Street, Philadelphia 2. During 1943 the Society continued its extensive standardization and research work in the field of engineering materials and issued numerous emergency specifications and emergency alternate provisions in existing standards to expedite the procurement of materials and to conserve strategic materials. A great many members are participating in Government and war production work. Important meetings were held to aid in the war effort; the 1944 Committee Week and Spring Meeting was held in Cincinnati, Ohio, February 26 to March 3. The 1944 Annual Meeting (47th) was scheduled for New York City, June 26 to 30.

Textile Foundation, The, an organization founded in 1930 to do scientific and economic research for the benefit of the textile industry. Chairman of Board of Directors: Franklin W. Hobbs. Secretary: Edward T. Pickard. Headquarters: Industrial Building, National Bureau of Standards, Washington, D.C. The laboratories and research workers of the Foundation are wholly engaged in work having to do with the prosecution of the war.

Theatre Wing War Service, Inc., American, founded as a nonprofit war service organization to further the war effort of the United Nations. It represents the entire entertainment world, including stage, screen, vaudeville, music, and all the allied crafts. Membership: about 50,000. President: Rachel Crothers. Chairman of the Board

and Secretary: Antoinette Perry. Headquarters: 730 Fifth Avenue, New York City 19. The most noted activity of the Wing in 1943 continued to be the Stage Door Canteens where service men in uniform of the United Nations are entertained and fed without cost; Canteens are now located in Newark, N.J., Philadelphia, Washington, D.C., Cleveland, and San Francisco. In addition, the motion picture, *Stage Door Canteen*, shattered box-office records, which will bring in an estimated \$2,000,000 to be turned back to the Wing for war service use; while the radio program of the same name continued its popularity and its steady income for use of the Wing.

Other activities of the Wing in 1943 were numerous but may be mentioned as follows: a campaign personnel division which supplied young women to sell war stamps and bonds in all theaters; a club for merchant seamen; a first aid and blood donor center which operated through donations from players of current plays and from craft groups of the theater; a Hospital Committee to provide entertainment for hospitalized cases; a motion picture *It's Up to You*—educational propaganda on point rationing; "Lunchtime Follies" created to provide entertainment for factory workers and to curing production evils; a Music War Committee formed to produce good war songs; a national contest for songs, sketches, and one-act plays; the speakers bureau and victory players, both of which served many departments of the federal government by launching various war effort campaigns; a War Dog Fund to put fighting dogs in the hands of the armed forces; the War Production Training Committee, a published survey of the crafts of the theater personnel, made available to the WMC; and a Committee on Youth in Wartime.

Tin Producers Association. See TIN.

Town Hall, The, Inc., founded in 1894 to establish a non-partisan, nonsectarian educational institution for the advancement and study of science, the arts, social, political and industrial problems, and to aid in the development of good citizenship and sound municipal government. Membership: 2,250. President: George V. Denny, Jr. Vice President—Comptroller: William Steinhoff. Secretary: Iva Nichols. Headquarters: The Town Hall, 123 West 43 Street, New York City. Outstanding events during 1943 included a series of morning lectures each week day except Thursday from November through March; a broadcast of "America's Town Meeting of the Air" each Thursday evening over the Blue Network; and the annual series of eight Endowment Concerts by outstanding artists.

Trade Association Executives, American, formed in 1920 as a means to establish a better and wider public understanding of the purposes and functions of responsible trade associations, the professional standards of service and conduct which they maintain, and character of service rendered; and provides a common ground where men and women representing trade associations may pool their interests and share in the interchange of information and opinion. Membership: over 600. President: Merrill A. Watson. Executive Secretary: Ruth I. Mulroy. Headquarters: 1427 Eye Street, N.W., Washington, D.C. The annual meeting was held in New York City, Sept. 23-24, 1943.

Transportation Association of America, founded in April, 1935, to carry out research and education in matters pertaining to transportation, dedicated to the preservation of private ownership and to the formulation and effectuation of a sound national transportation policy. President: Sydney Anderson. Secretary: E. C. Krogh. Headquarters: 105 West Adams Street, Chicago.

Travelers Aid Association, National, an organization founded in 1917 to promote means of cooperation and improve, throughout the country, the standards of Travelers Aid Service, which includes individualized information, travel, and short-contact service to travelers and other persons away from their homes; to study the causes of migration, and to encourage a public understanding of moving people. Membership: operating members—95 local Travelers Aid Societies providing Travelers Aid services in 486 cities; cooperating members—919 organizations and individuals on call for Travelers Aid service in 1,256 places where no regular Travelers Aid Society exists; associate members—individuals and organizations interested in supporting Travelers Aid services. President: Randall J. LeBoeuf, Jr. Secretary: Eleanor D. Gillespie. Headquarters: 425 Fourth Avenue, New York City 16. A biennial convention is scheduled to be held in 1944. As a member agency of the United Service Organizations, Inc., the following services for members of the armed forces and war production workers have been established: 144 U.S.O. Travelers Aid operations serving 208 communities; 125 Troops in Transit Lounges.

Tuberculosis Association, National, founded in 1904 for the study and prevention of tuberculosis. Membership: over 2,400. President: L. J. Moorman. Secretary: Charles J. Hatfield. Headquarters: 1790 Broadway, New York City 19. In 1943 the Trudeau Medal was awarded to Dr. David R. Lyman. The usual annual meeting will not be held in 1944.

United China Relief, Inc., organized in February, 1941,

to raise funds for relief and rehabilitation in China. Honorary Chairman: Wendell L. Willkie. Chairman: Paul G. Hoffman. President: James L. McConaughy. Vice-President and Secretary: B. A. Garside. Headquarters: 1790 Broadway, New York City. United China Relief is a coordination of the activities of eight participating agencies: American Bureau for Medical Aid to China; American Committee for Chinese War Orphans; American Friends Service Committee; Associated Boards for Christian Colleges in China; China Aid Council; China Emergency Relief Committee; Church Committee for China Relief; Indusco (American Committee in Aid of Chinese Industrial Cooperatives); also of two affiliated organizations: China Child Welfare; China's Children Fund. United China Relief is a Member Agency of the National War Fund, Inc. (q.v.).

United Seamen's Service. See NATIONAL WAR FUND.

United Service Organizations. See separate article.

University Professors, American Association of, a professional organization of college and university teachers and investigators, founded in 1915 to facilitate more effective cooperation among the members of the profession, to promote the interests of higher education and research, and to increase the usefulness and advance the standards and ideals of the profession. The nature of its work is indicated by the titles of the committees, which include Academic Freedom and Tenure, Freedom of Speech, International Relations, Educational Standards, Author-Publisher Contracts, Professional Ethics, Relation of Junior Colleges to Higher Education, Cooperation with Latin-American Universities, Pensions and Insurance, Preparation and Qualification of Teachers, Encouragement of University Research, Library Service, Place and Function of Faculties in College and University Government, and the Economic Welfare of the Profession. Membership: about 16,000. President: W. T. Laprade. General Secretary: Ralph E. Himstead. Headquarters: 1155 Sixteenth Street, N.W., Washington, D.C.

University Women, American Association of, founded in 1882 for practical work in education, especially the raising of standards in higher education for women. Membership: over 70,000. President: Dr. Helen C. White. General Director: Dr. Kathryn McHale. Headquarters: 1634 I Street, N.W., Washington, D.C. The headquarters staff and national committees are technicians in their fields and are responsible for the development of the program in all the state divisions and the 915 branches of the Association. A research information service is maintained at headquarters for the services to member colleges and universities covering current changes and experiments in higher education. In this crisis, it is the purpose of the American Association of University Women to unite college-trained women to make the most effective possible use of their resources of training and experience in winning the war. Through its national, state, and local units, the Association seeks to use the tools of education to promote the war effort and help people to meet the strain of this great struggle.

Urban League, National, an interracial organization, founded in 1910, which works to improve living conditions among Negroes in urban communities throughout the United States; the League operates through local affiliates in 48 key industrial centers which have interracial boards and committees staffed by professional trained workers. Membership: about 20,000. President: William H. Baldwin. Executive Secretary: Lester B. Granger. General Secretary: Eugene Kinckle Jones. Headquarters: 1133 Broadway, New York City. During 1943 the League especially emphasized a policy of wider and fairer use of Negro manpower in the armed forces and industry to aid in the war effort. The League publishes *Opportunity*, *Journal of Negro Life*, and occasional papers on problems of racial contacts. The 1944 annual meeting was held in New York City, February 9.

U.S.O. See UNITED SERVICE ORGANIZATIONS.

Veterans of Foreign Wars of the United States (V.F.W.), founded in 1899 to perpetuate the comradeship formed among men who have borne arms in America's wars and campaigns on foreign soil or in hostile waters, and to continue their patriotic service in behalf of the nation as a whole, of children, and particularly of disabled veterans. Rapid membership increases, as soldiers, sailors, and marines became eligible as soon as they entered the combat zones of the present war, added more than 150,000 World War II participants to the membership rolls, which previously had consisted of more than 250,000 veterans. Commander in Chief: Carl J. Schoeninger. Headquarters: Broadway at 34 Street, Kansas City, Mo. The Japanese attack on Pearl Harbor found the V.F.W. already deeply engaged in war activities. Members throughout the country were serving on draft boards, in civilian defense programs, and were otherwise lending their assistance to the nation's preparedness program. During 1943 the V.F.W.'s war program included: Promotion of a 10-point postwar veteran welfare program as follows: (1) Continuation of pay, within certain limits, for a period of six months after honorable discharge at the close of the present war, for all persons serving in the armed forces of the United States; (2) Educational aid by the federal government to honorably discharged veterans of the pres-

ent war whose educations were interrupted or prevented by military or naval service; (3) Adequate Veterans' Administration hospital facilities for medical treatment and hospitalization of honorably discharged veterans; (4) Pension and compensation payments to be established and maintained on a fair and reasonable cost of living index; (5) Effective, workable veteran preference in employment on federal, state, county, and municipal jobs; (6) All supply and construction contracts between the federal government and private firms or contractors to contain clause that three employees of every 10 or major portion thereof, of said private firms or contractors, shall be honorably discharged veterans; (7) Pension entitlement to widows and orphans of honorably discharged deceased veterans of any recognized war, campaign, or expedition; (8) Pension entitlement to honorably discharged veterans of any war, campaign, or expedition who had at least 90 days' service and who are (a) unemployable, (b) unable to secure gainful and sustaining employment, and (c) disabled to a degree of 10 per cent or more regardless of service connection of said disability; (9) Special recognition for honorably discharged veterans of any recognized war, campaign, or expedition, who served on foreign soil or had sea duty in hostile waters, by a special allowance of 20 per cent above standard rates for compensation, pension and retirement pay, and a five-point addition above standard additions in veteran preference on classified Civil Service examination grades; (10) Continuation and expansion of the Veterans' Administration as an independent federal agency with full jurisdiction over vocational rehabilitation for service-connected disabled veterans; medical treatment, hospitalization, pensions, and compensation for all eligible veterans; and continuation and expansion of the Veterans' Employment Service to render special assistance to all honorably discharged veterans in need of or seeking employment.

Other V.F.W. activities throughout 1942-43, included the recruiting, and qualifying for training, of 45,000 youths for the Army Air Forces, in addition to 37,000 for other branches of the Armed Forces; distribution of more than 9 million Buddy Poppies in the 22nd annual V.F.W.-sponsored sale for the benefit of the V.F.W. program of relief and rehabilitation for disabled veterans and their dependents, and continuation of the permanent three-fold V.F.W. program of child welfare, veteran care, and Americanism.

Veterinary Medical Association, American, founded in 1863 to promote veterinary science and its proper application. Membership: 8,000. President: Chas. W. Bower. Secretary: J. G. Hardenbergh. Headquarters: 600 South Michigan Ave., Chicago 5. The International Veterinary Congress prize for outstanding research was awarded in 1943 to Dr. Otto Stader, 319 E. Lancaster Ave., Ardmore, Pennsylvania. The 1943 meeting was held in St. Louis. The 1944 meeting will be held in Chicago.

Vocational Association, Inc., American, founded in 1925 with the conviction that occupational education is a primary right and privilege of every citizen. Membership: 26,782. President: Fred A. Smith. Executive Secretary: L. H. Dennis. Headquarters: 1010 Vermont Avenue, N.W., Washington, D.C. During 1943 the Association continued to give organized assistance to the effective development of vocational training for war production industries. Over five million persons were trained for occupations in the last three years. The annual convention was held in Chicago in December, 1943.

Vocational Guidance Association, Inc., National, founded in 1913 to unite persons engaged or interested in any phase of vocational guidance and occupational adjustment. Membership: 3,000. President: Margaret E. Bennett. Executive Secretary: Christine Melcher. Headquarters: 525 West 120 Street, New York City. Official journal: *Occupations*, the Vocational Guidance Magazine, published monthly October to May. The organization functions through 68 branches, in 31 states, 2 territories, and a Canadian province; national committees specializing in various phases of vocational guidance; regional conferences. Current activities are concerned with school-work programs, plans for postwar occupational adjustment and rehabilitation, and cooperating in promoting vocational guidance in Latin America.

Warm Springs Foundation, see PHILANTHROPY.

War Prisoners Aid. See NATIONAL WAR FUND.

Weights and Measures, American Institute of, founded in 1916 to defend the English system of weights and measures against pro-metric propaganda. Membership: 85 corporations. President: W. R. Ingalls. Secretary: Robert F. Cogswell. Headquarters: 33 Rector Street, New York City.

Wildlife Institute, American, an educational and scientific organization for the restoration of North American wildlife, founded in 1935. President: Frederic O. Walcott. Secretary: J. Paul Miller. Headquarters: 822 Investment Building, Washington, D.C. The Institute participates in 14 cooperative game management and wildlife research projects in different states and Canada. It sponsors the North American Wildlife Conference annually, and publishes the *Transactions of the meetings held in connection with this Conference*. It assists in the publication of books, bulletins, etc., relating to the conservation of natural resources.

Woman's Association, American, founded in 1922 to provide for women engaged in commercial and professional pursuits, facilities for business and social contacts, and opportunities for recreation, mental stimulus, and physical betterment; to advance the economic, cultural, and social interests of women in their chosen fields of endeavor; and to maintain in the city of New York and elsewhere a clubhouse or other club quarters. Membership: 1,000. President: Natalie W. Linderholm. Secretary: Thalia N. Brown. Headquarters: The Barclay, 111 East 48 Street, New York City 17. Events of 1943 included the annual Association meeting, in April. The winner of the Anna W. Porter memorial award was Frances J. Pratt. In September an Association meeting commemorating the first anniversary in the new quarters was held, with Fannie Hurst as speaker, and in November, at the 17th annual Friendship reunion, the A.W.A. award was presented to Anne Morgan.

Woman's Christian Temperance Union, National (WCTU), founded in 1874 to unite Christian women of the United States for the education of public sentiment in favor of total abstinence from the use of all alcoholic liquors, and to train the young in habits of sobriety. Membership: about 400,000. President: Mrs. Ida B. Wise Smith. Secretary: Miss Lily Grace Matheson. Headquarters: 1730 Chicago Avenue, Evanston, Ill. Continuing its emphasis upon the need for total abstinence in wartime, the Union supported enactment of legislation calling for prohibition of the sale of alcoholic liquors for the duration of the war and during the demobilization period. Increased support was given the Red Cross through gifts of 17 mobile units and other activities. The Safety School on Wheels, a Physical Fitness Clinic, was routed in United States centers where it was visited by 100,000 servicemen. Increased gifts and purchases brought the collection in the Frances Willard Memorial Library up to 85,000 volumes and a similar number of pamphlets and manuscripts, making it the largest alcohol library in the world now open to scholars and specialists in this field. Children's and youth's activities were strengthened through accelerated programs of the Loyal Temperance Legion and the Youth's Temperance Council. The slogan adopted for 1944 is "Christians Unite for Total Abstinence."

Women Artists, Inc., National Association of, founded in 1889 to exhibit and display works of art by contemporary artists. Membership: 800. President: Georgiana B. Harberson. Executive Secretary: Josephine Droegge. Headquarters: the Argent Galleries, which the Association maintains, 42 West 57 Street, New York City. The Association sponsors an Annual Exhibition, at which a number of prizes are awarded, general exhibitions, rotary shows, a sketch class, lectures, etc. The annual open meeting is held at the headquarters the second Wednesday in April.

Women of the United States, Inc., National Council of, founded in 1888 as a confederation of workers committed to the overthrow of all forms of ignorance and injustice, and to the application of the Golden Rule to society, customs, and law. Membership: about 5,000,000. President: Mrs. Harold V. Milligan. Headquarters: 501 Madison Avenue, New York City. Activities in 1943 were centered in conducting, in cooperation with the *Atlantic Monthly*, a nation-wide contest among women's organizations for best essays on "What Women Demand of a Postwar World." The names of the four winners and highlights from their papers were broadcast over CBS, April 7.

Women's American Ort, listed under *Ort, Women's American*.

Women's Clubs, General Federation of, founded in 1890 to unite the women's clubs and like organizations throughout the world for the purpose of mutual benefit, and for the promotion of their common interest in education, philanthropy, public welfare, moral values, civics, and fine arts. Membership: 2,500,000 women in 16,500 clubs. President: Mrs. John L. Whitehurst. Headquarters: 1734 N Street, N.W., Washington, D.C. In 1943 the Federation sponsored a special campaign for the sale of war bonds to provide a fleet of bombers, bearing names of the State Federations, District Federations, and clubs. A quarter of a million dollars was raised by clubs to provide scholarships of \$250 each to student nurses; thousands of student nurses were recruited. Other programs of the year included an organized campaign to further food conservation; gardening; salvage drives; nutrition classes; nurse's aide, first aid and home nursing courses; recruitment of labor for farms and industry; recruitment of Wacs, Waves, Spars, Wafs, and Marines; extension of Pan American scholarships; and the study of peace and postwar planning.

Women's Voluntary Services, American (A.W.V.S.), a permanent, nonsectarian, nonpolitical, and nonprofit national organization, created in January, 1940, to unite American women in the defense of their homes and the service of their communities and country, and motivated by a threefold purpose: to train women to translate a desire to help into a valuable skill; to place women where each is best qualified to serve; and to stand ready to serve the armed forces and any other governmental bureau. Membership: over 300,000. President: Mrs. Alice Throckmorton McLean. Secretary: Mary Vail Andrews. Head-

quarters are at 545 Madison Avenue, New York City. **Women Voters, National League of**, established in 1920 to promote political education through active participation of citizens in government. Membership: 34 affiliated State Leagues and over 600 local Leagues. President: Miss Marguerite M. Wells. Secretary: Mrs. R. T. H. Halsey. Headquarters: 726 Jackson Place, Washington, D.C.

World Alliance for International Friendship through the Churches, founded in 1914 to promote international goodwill and peace. Membership: about 1,000. President: Rt. Rev. G. Ashton Oldham. General Secretary: Henry A. Atkinson. Headquarters: 70 Fifth Avenue, New York City. The organization published in 1943 the monthly *News Letter*; *The Study of Peace Aims in the Local Church*; *Choose You This Day, 1943*; *Half of Humanity*; *Win the War—Win the Peace*; *The Peace Must Be Won Now*; *Program for Action*; and a Christmas leaflet.

World Calendar Association, Inc., founded in 1930 to educate the public in the defects of our present calendar and on the benefits which a revised calendar, the perpetual World Calendar of 12 months and equal quarters, would bring to the world. Membership: about 12,000. President: Elisabeth Achelis. Secretary-Treasurer: Harriet A. Lillie. Headquarters: International Building, 630 Fifth Avenue, New York City. A contract was signed by Teachers College of Columbia University and The World Calendar Association to establish a one-year fellowship to develop a syllabus for the study of time measurement and calendar revision for use in secondary schools and junior colleges. Dr. William E. Castle, of the University of California, made a survey of the National Academy of Sciences on The World Calendar. The answers approving were 128 (76%). The World Calendar Association publishes a quarterly magazine, the *Journal of Calendar Reform*, and prepares pamphlets and articles for magazines.

World Peace Foundation, established in 1910 to promote international order and peace through publications, study groups, and a reference service. President: George H. Blakeslee. Director: Leland M. Goodrich. Headquarters: 40 Mt. Vernon Street, Boston, Mass. The Foundations published in 1943 *The Future Economic Policy of the United States*, by William Adams Brown, Jr.; *Collective Security: The Why and How*, by Senator Joseph H. Ball; *War and Peace Aims of the United Nations*, by Louise W. Holborn; volume five of *Documents on American Foreign Relations* (scheduled for publication in 1944). The Foundation also published *Postwar Problem Analyses*, in association with the Universities Committee on Post-war International Problems.

Young Men's Christian Associations, The National Council of (Y.M.C.A.), formed as a national committee in 1866. The first local organization was formed in London in 1844 (in the United States in 1851) for the physical, mental, social, moral, and religious education of youth. Membership: 1,199,223 in 1,200 local associations. President: Howard S. Coffin. General Secretary: Eugene E. Barnett. Headquarters: 347 Madison Avenue, New York City. Major emphasis in 1943 included service to young men in military and related defense service as one of six agencies composing the United Service Organizations, with responsibility for operating approximately 493 clubs and centers, in addition to extending regular facilities everywhere. Also expanded greatly needed service among four to six million prisoners of war, through World's Alliance at Geneva, and continued fifty-year-old program of international cooperation in thirty countries. Policies approved by the National Council for the year included (1) to assist military and civilian youth and adults to play their part as Christians in the struggle for freedom and a world of justice, peace, and order; (2) to share with churches, educational and governmental agencies in seeking a basis for world organization for decisive victory, and create a public opinion that will assure acceptance by Americans of their responsibility in such a world order; and (3) to join with other Christian movements in education and motivation of youth for the practice of democracy at home as between groups based on race, color, religion, or economic distinctions. Special emphases of the year included twenty-four hour service for "swing shift" industrial workers; study of acute adjustment needs of younger boys and pre-military service groups; cooperation with civilian defense activities; priority for public affairs and citizenship education; restudy of membership policies; postwar adjustments at home and abroad.

Young Men's Hebrew Association and Young Women's Hebrew Association. See JEWISH WELFARE BOARD.

Young Women's Christian Associations of the United States of America (Y.W.C.A.), established in 1906 to advance the physical, social, intellectual, and spiritual interests of young women. Membership: about 500,000. President: Mrs. Henry A. Ingraham. General Secretary: Mrs. Harrison S. Elliott. Headquarters: 600 Lexington Avenue, New York City. During 1943 the Y.W.C.A. in addition to providing its regular ongoing program of service to women and girls, continued to expand and adapt this program to meet the ever-increasing war pressures and demands. As a member agency of the U.S.O., the Y.W.C.A. carried responsibility for 289 U.S.O. operations which served a large constituency of men and women in the armed forces and those employed in war production in-

dustries. A special wartime project of the Y.W.C.A. was that carried as one of the agencies comprising American War-Community Services. As part of this joint enterprise the Y.W.C.A. served women and girls by providing recreation and other facilities in communities where there was an enormously increased population and where few or no such facilities existed. Through the support of the World Emergency and War Victims Fund of the Y.W.C.A. in the United States, the Y.W.C.A.'s in the United Nations were enabled to meet the war needs of their women and girls, both those at home and in service, and to aid in the relief and restoration of war victims.

Youth Hostels, Inc., American, founded in 1934 to help all, especially young people, to a greater knowledge, understanding, and love of the world; to enable them through hostelling to enjoy the cultural benefits of travel and to live happier and healthier lives. Membership: 10,865 pass-holders. Honorary President: Dr. Mary E. Woolley. President: Julien Cornell. National Directors: Monroe and Isabelle Smith. Headquarters: Northfield, Massachusetts. In 1943 thousands of hostellers worked on farms as their national service, hostelling to their work area and home at vacation's end. Hostels are now chartered in 25 states.

Youth Problems, Committee on, appointed by the American Council on Education in 1942 to implement the findings of the American Youth Commission, and to form a rallying point for the many and worthy organizations carrying on youth programs, both governmental and non-governmental. Chairman: Henry I. Harriman. Executive Secretary: Donald J. Shank. Headquarters: 744 Jackson Place, Washington, D.C. The original American Youth Commission was set up in 1935 by the American Council on Education with funds granted by the General Education Board, to study and evaluate factors relating to the care and education of American youth. With publication of its final report *Youth and the Future*, in January, 1942, the work of the Commission was completed, and with its disappearance it was apparent that there was no one group left in the field whose interest was not centered upon some one segment of the youth population of the nation. For this reason the Committee on Youth Problems was founded. Publications: *Color, Class, and Personality*; *Youth and the Future*; *Working with Rural Youth*; *Youth in the CCC*; *Barriers to Youth Employment*; and 20 other titles.

Zionist Organization of America, founded in 1897 to enlist public support for the upbuilding of a Jewish Commonwealth in Palestine and to foster a program of Jewish renaissance. Membership: 70,000 exclusive of membership of affiliated and constituent organizations. President: Dr. Israel Goldstein. Executive Director: Simon Shetzer. Headquarters: 1720-16th Street, N.W., Washington 9, D.C. The destruction of European Jewish communities placed upon the American Zionist Organization the major responsibility for continuing the upbuilding of the Holyland. To this end the Organization carries on a public relations and educational program designed to acquaint the American public with the achievements of the Jews in Palestine. The 46th annual convention was held at Columbus, Ohio, on Sept. 11-15, 1943.

Zonta International, a classified service club for women executives, organized in 1919 to encourage high ethical standards in business and to improve the legal, professional, economic, and political status of women. Membership: about 4,500. President: Miss J. Winifred Hughes. Executive Secretary: Miss Harriet C. Richards. Headquarters: 59 E. Van Buren Street, Chicago. The organization has member clubs in the United States, Canada, Sweden, Iceland, and in some of the occupied countries of Europe. Clubs in the United States and Canada concern themselves with war services of many kinds and with efforts to promote qualified women for participation in postwar world programs.

SOCOTRA. See ARABIA under *Aden Protectorate*.
SODA ASH, CAUSTIC SODA. See **CHEMICAL INDUSTRY**.

SOLID FUELS ADMINISTRATION FOR WAR. An agency established in the Department of the Interior by executive order on Apr. 19, 1943, which absorbed the preceding Office of Solid Fuels Coordinator for War. It centralizes Government policies and activities pertaining to bituminous and anthracite coals and certain other solid fuels, utilizing the other agencies of the Department of the Interior in discharging its functions. The Administrator, who is the Secretary of the Interior, issues policy and operating directives to units of the solid fuels industries, recommends to the WPB any necessary program for wartime distribution or materials needed, and advises with the OPA on rationing and price adjustments, requests action from the War Man-

power Commission when labor shortages threaten necessary wartime production, etc. See **COAL**; **HEATING**.

SOLOMON ISLANDS. See **AUSTRALIA** under *History*; **BRITISH SOLOMON ISLANDS**; **NEW GUINEA, TERRITORY OF.** For **Solomons Campaign**, see **AERONAUTICS** under *Performance*; **WORLD WAR** under *The War in the Pacific*.

SOMALILAND. See under **BRITISH, FRENCH, and ITALIAN SOMALILAND**.

SORGHUMS. See **AGRICULTURE** under *Production*.

SOUTH AFRICA, Union of. A self-governing dominion within the British Commonwealth of Nations. Seat of the government, Pretoria; seat of the legislature, Cape Town.

Area and Population. The area by provinces and the population by provinces and racial composition as officially estimated for June 30, 1941, are shown in the accompanying table.

SOUTH AFRICA: AREA AND POPULATION
[Estimated, June 30, 1941]

Province	Area, sq. miles	Europeans	Bantus ^a	Asiatics & mixed
Cape of Good Hope	277,169 ^b	836,100	2,184,400	761,700
Natal.....	35,284	204,600	1,695,800	218,600
Transvaal.....	110,450	946,500	2,772,000	84,800
Orange Free State..	49,647	201,000	598,500	17,700
Total.....	472,550	2,188,200	7,250,700	1,082,800

^a Negroes. ^b Including Walvis Bay (430 sq. miles).

The total estimated population on June 30, 1942, was 10,708,500 (Europeans, 2,230,000; non-Europeans, 8,478,500). The census of Europeans taken May 6, 1941, showed 1,109,289 males and 1,082,896 females, or a total of 2,192,185. Living births among Europeans in 1941 numbered 54,569; deaths, 20,733; marriages, 22,690. In 1941 Johannesburg had 281,706 European inhabitants, Cape Town, 187,946; Durban, 112,890; Pretoria, 112,778. Total populations of the chief cities, including suburbs, at the 1936 census were, with the number of Europeans in parentheses: Johannesburg, 519,384 (257,671); Cape Town, 344,233 (173,412); Durban, 259,606 (95,033); Pretoria, 128,621 (76,935); Port Elizabeth, 109,841 (53,461); Germiston, 79,440 (32,564); East London, 60,563 (31,311); Bloemfontein, 64,233 (30,291). The same census showed that the home language of 1,120,770 persons (55.93 per cent of the European population) was Afrikaans, 783,071 (39.08 per cent) English, 50,411 (2.52 per cent) English and Afrikaans, 17,810 German, and 17,684 Yiddish. The Afrikaners are mainly engaged in agricultural pursuits while the British tend to dominate commerce, trade, and finance.

Education and Religion. State-conducted and state-aided public schools for European pupils numbered 3,808 with 394,180 pupils in 1940; for non-Europeans, there were 5,173 schools with 649,108 pupils. Current expenditures for these schools numbered £10,387,435 (South African pounds) in 1940. In 1941 there were 9,303 full-time and 2,004 part-time students enrolled in the five universities. The religious affiliations of the European population at the 1936 census were: Dutch churches, 1,088,826; Anglican, 345,103; Presbyterian, 82,283; Methodist, 140,658; Roman Catholic, 92,352; Jewish, 90,662.

Production. Gold mining, the most important industry, employs nearly 400,000 persons. It nor-

mally accounts for over 70 per cent of the value of all exports and for 30 per cent of the Treasury's ordinary revenue. Gold production in 1941 reached the record level of 14,386,361 fine oz. valued at £120,845,114. In 1942 it declined to 14,120,617 fine oz., valued at £118,613,158. Gold-mine dividends reached a peak of £21,061,000 in 1940. Output of other minerals in 1940 was (in short tons): Coal, 18,933,764; chromite, 180,390; copper, including gold concentrates, 19,804; iron ore, 704,113; manganese ore, 454,233; pyrites, 40,456; asbestos, 27,392; magnesite, 13,098; corundum, 4,211. The 1940 platinum production was 70,272 oz.; diamonds, 543,463 metric carats, valued at £1,620,467.

Yields of the chief crops in 1940-41 were (in metric tons): Wheat, 466,800; corn, 2,159,100 (excluding native cultivation); cane sugar, 467,800 (580,000 short tons, estimated, for 1942-43). Oats, rye, barley, potatoes, citrus fruits, tobacco, and tea are secondary crops. Wine production in 1941 was 50,382,297 Imperial gal. Livestock in 1939 included 12,060,000 cattle, 38,406,000 sheep, 6,140,000 goats, 965,000 skine, and 777,590 horses (1937). The wool clip for 1940-41 was about 811,888 bales (of 477 lb.). The census of 1937-38 showed 10,234 industrial establishments, with 348,520 employees (143,760 whites). The newly established steel industry produced 360,000 metric tons of pig iron and ferro-alloys in 1942 (312,000 in 1941). According to the Federation of Engineering and Metallurgical Associations, engineering in 1942 ranked second in importance among the Union's industries, with a capital investment of £15,369,000, a gross output of £42,943,000, 81,000 employees, and an annual wage bill of £12,943,000.

Foreign Trade. Imports in 1940 totaled £105,099,234 (£91,341,108 in 1939); exports, excluding gold, £34,090,637 (£34,196,010 in 1939). Figures are in South African currency. For the distribution of the 1940 trade, see 1942 YEAR BOOK. Trade statistics for 1941 and ensuing years were not published.

Finance. For the fiscal year ended Mar. 31, 1943, actual budget receipts (excluding loans) were £108,500,000 (£85,500,000 in 1941-42); total expenditures, £163,300,000 (£132,300,000 in 1941-42); and war expenditures about £80,000,000 (£72,100,000 in 1941-42). Preliminary budget estimates for 1943-44 placed total expenditures at £163,540,500, of which £108,540,500 was to be obtained from revenue, and £55,000,000 from loans. Of the total expenditures, £96,000,000 were for war. This sum raised the Union's total war expenditures during World War II to £570,000,000. Including the external debt at par, the total public debt increased from £293,000,000 on Dec. 31, 1939, to £430,000,000 on Mar. 31, 1943. The external debt, which amounted to £103,000,000 on Sept. 1, 1939, was reduced by the exchange of newly mined gold for Union securities held in London to less than £7,000,000 in 1943. Average exchange value of the South African pound: \$4.4017 in 1939 and \$3.98 during 1940-43.

Transportation. The Union in 1942 had in operation 13,241 miles of government-owned railway lines, 92,143 miles of highways, and air lines serving all of the principal cities and connecting with the British air network radiating from Cairo and with the Pan American Airways terminal at Leopoldville, Belgian Congo. In January, 1942, the Sabena (Belgian) air system inaugurated a new line between Leopoldville and Cape Town. The

South African Railways and Harbors system, an autonomous government corporation, reported gross surpluses of £3,641,507 for 1941-42 and £4,168,000 for 1942-43, raising its accumulated surplus on Mar. 31, 1943, to about £11,040,926. The chief ports are Durban, Cape Town, Port Elizabeth, and East London. An important part of the Union's trade flows through Lourenço Marques, Mozambique.

Government. Executive power is exercised by the Governor General, appointed by the King on recommendation of the South African Government, and by the Executive Council (Cabinet), which is responsible to Parliament. Parliament consists of a Senate of 44 members serving 10-year terms (8 appointed by the Governor General and 36 elected) and a House of Assembly of 152 members, elected by white male and female suffrage for five years unless sooner dissolved. Governor General in 1943, Sir Patrick Duncan (assumed office March, 1937).

The United Party, which had controlled the Government since 1933, split on Sept. 5, 1939, when Prime Minister J. B. M. Hertzog's neutrality policy was opposed by Gen. (later Field Marshal) J. C. Smuts, then Deputy Prime Minister, and defeated in the House of Assembly, 80 to 67. Prime Minister Hertzog resigned when the Governor General refused his request for the dissolution of Parliament and new elections. General Smuts formed a new Government Sept. 5, 1939, with the support of the Dominion and Labor parties. On September 6 he proclaimed the Union to be at war with Germany (for other war declarations, see table under WORLD WAR). Dissident elements in the United Party then merged with the pro-republican Nationalists under Dr. D. F. Malan to form the Reunited National or People's party in opposition to the Government. There was a split in the Reunited Party in November, 1940, when General Hertzog and a group of his followers resigned in protest against the Malanite program for immediate establishment by legal means of a Boer-dominated republic. Hertzog retired from active politics (he died Nov. 21, 1942), but his followers in January, 1941, formed the new Afrikaner party, led by Hertzog's former Minister of Finance, N. C. Havenga. While opposing participation in the war, this party stood for equal civil, religious, and cultural rights for both Dutch and British elements of the population. A further split within the Reunited National or People's party took place in 1942, when 17 members of the House of Assembly and one Senator formed the so-called New Order Group in opposition to Dr. Malan's leadership. Headed by Oswald Pirow, Hertzog's former Minister of Defense, this group advocated the establishment of a Nazified state, and was apparently prepared to use violence to attain its end. For developments in 1943, see below.

HISTORY

Smuts' Greatest Victory. With the reconvening of Parliament on Jan. 16, 1943, Prime Minister Jan C. Smuts opened the final and decisive campaign of his hard-fought political struggle for the full participation of the Union in the World War as a loyal member of the British Commonwealth of Nations. The struggle began at the outbreak of the conflict in September, 1939, when Smuts assumed leadership of the pro-war forces that ousted Prime Minister Hertzog and obtained Parliament's approval of a declaration of war against Germany by the narrow margin of 13 votes. The anti-war and

anti-British groups opposed to this policy fought stubbornly to obstruct the Government's war efforts, to revoke the war declaration, and in some cases to bring about immediate secession from the British Commonwealth.

By courageous and shrewd leadership, Smuts and his supporters gradually won an increasing margin of strength over the Opposition (see preceding YEAR BOOKS). By the outset of 1943 Smuts' star was strongly in the ascendant due to the success of his policy in meeting a demonstrated threat to South Africa's independence and security. British landings in Madagascar in 1942 had forestalled a Japanese occupation, which would have brought South African cities within air range of Madagascan bases. British naval power had kept the sea lanes to South Africa open despite depredations of German and Japanese submarines. Finally, Allied forces were on the point of throwing the Axis out of its last foothold on the African continent in Tunisia. The victory which to many South Africans had seemed impossible was at last within sight.

Despite the fact that an estimated 40 per cent of the Afrikaners still remained either openly hostile or indifferent to the war, Smuts now had an important strategic advantage. He pressed this advantage by giving notice that the new session of Parliament would be asked to authorize voluntary service for South African volunteer troops outside of the African continent. The Opposition leader, Dr. D. F. Malan, sought to undermine the Government's rising prestige among the Afrikaners by demanding a comprehensive scheme of social security and more effective state control of the mining and manufacturing industries that were largely dominated by British capital.

The debates in Parliament were punctuated by new bombing outrages, attributed to German agents or sympathizers among the extremist fringes of Afrikaner nationalists. Toward the end of January an engineering factory at Brakpan was partially wrecked by a bomb. Telephone lines were cut, and several pylons carrying high-tension power lines were dynamited. On March 11 a former South African policeman and noted athlete, Sydney Robey Leibbrandt, was convicted of high treason at Pretoria and sentenced to death for serving as a German agent in organizing sabotage (see 1943 YEAR BOOK for his activities).

Meanwhile Smuts' motion authorizing South African troops to serve outside the continent was approved by the House of Assembly on February 4 by a vote of 75 to 49, or exactly double the majority the Prime Minister had at the outset of his war administration. Smuts followed up this victory by announcing on April 21 that a general election would be held in August.

The Election. For the first time since the outbreak of the war, the Union's 1,250,000 voters—20 per cent of whom were in the armed forces—were thus given an opportunity to pass upon the issue of war or peace. Describing himself as "an old horse in his last race," the 73-year-old Prime Minister entered the campaign with the solid support of the Government coalition on a platform calling for vigorous prosecution of the war to a victorious conclusion and active participation in the creation of a postwar system of world order and security. The chief Opposition leader, Dr. Malan, said that if his Nationalist party won it would seek immediate peace with the Axis and recall all South African troops from the war fronts. He played upon racial antagonisms and made much of the danger from communism following an Allied victory.

The campaign was marked by daily shortwave broadcasts from Germany attacking the Smuts Government. The anti-Smuts groups' only hope of winning lay in forming a united front. However Dr. Malan rejected all proposals from the other anti-Smuts parties that he head a united Opposition ticket, with the result that the anti-Government vote was split in some constituencies. Former War Minister Oswald Pirow's "New Order" (National Socialist) party boycotted the elections. Nevertheless 75 per cent of the voters went to the polls on July 7 and registered an overwhelming victory for the Smuts Government and its war policies.

The following results show the standing of the various parties after the voting, with the pre-election standings in parentheses: Government coalition—United party (leader, Prime Minister Smuts), 89 (72); Labor party (leader, Walter Madeley), 9 (4); Dominion party (leader, Col. F. C. Stallard), 7 (8); Independents, 2 (0); total, 107 (84). Opposition parties—Reunited Nationalists or Herenigde (leader, Dr. Malan), 43 (41); "New Order" party (leader, Oswald Pirow), 0 (17); Afrikaner party (leader, N. C. Havenga), 0 (8); total, 43 (66). Smuts' United party emerged with a majority of 25 (28 including the three natives' representatives) over all the other parties. All of the Cabinet Ministers were reelected, some with record majorities. Nine Communist candidates were overwhelmingly defeated. Supporters of the Smuts Government polled a total of 610,143 votes against 347,057 polled by anti-Smuts candidates.

Government Reorganized. Soon after his victory, the Prime Minister announced a reorganization of the Cabinet departments. A Ministry of Transport was established, incorporating the existing Ministry of Railways and Harbors. A new Ministry of Welfare and Demobilization undertook to coordinate all Government activities concerned with social welfare and security. And a new Ministry of Economic Development was set up, embracing the existing Department of Commerce and Industries and the vice-chairmanship of the Cabinet committee on reconstruction.

Smuts in London. Two months after the election, Prime Minister Smuts arrived in London for lengthy consultations with Prime Minister Churchill and other British leaders. It was announced that he had been given the status of a member of the War Cabinet during his stay in Britain. The matters under discussion were not announced, but were understood to include postwar policies of the British Commonwealth of Nations—scheduled for discussion at a meeting of Dominion Prime Ministers in London in the spring of 1944—the disposal of the Italian colonies in Africa, etc. The Prime Minister's address to a distinguished audience at the Guildhall on October 19 attracted worldwide attention (see GREAT BRITAIN under *History*). Smuts returned home in December, stopping en route at Cairo to discuss with Prime Minister Churchill and President Roosevelt the developments at the Cairo and Tehran Conferences (see UNITED NATIONS).

Other Foreign Relations. The extension of discriminatory legislation against Indians and other Asiatics, restricting their purchases of real estate in certain South African cities, stirred up vigorous resentment in India and brought protests from the Indian Government. In September the Government imposed a ban on imports of certain manufactured goods from Argentina because of the high prices and poor quality of the goods received.

On March 12 the Prime Minister announced that the U.S. Government was sending a representative to South Africa to negotiate a lend-lease agreement. No such agreement was announced up to the end of the year, but early in October the British, South African, and U.S. Governments agreed to establish a joint supply council in Johannesburg to assist the Union in meeting its supply difficulties and in mobilizing its economic resources to further the United Nations' war effort. A statement by Dr. H. J. van der Byle, Director-General of Supplies for South Africa, indicated that South African troops and supplies were being diverted from the European to the East Asian theater of war.

Economic Developments. With some 60,000 men at work in factories engaged entirely on war production and an accompanying increase in production of manufactured articles for civilian consumption, South Africa in 1943 experienced a spectacular industrial development. The economic boom and curtailment of imports produced a sharp rise in prices and in the amount of currency in circulation, despite Government efforts at price control. Effective February 1 a National Supply Council was established to advise the Government on the regulation of production, supply, and trade. The Director-General of Supplies used his extraordinary powers to form a 10-man Control Board through which businessmen took over control of the whole military and civilian supply program from the civil service. However the country's heavy dependence upon imports of manufactured commodities made the price stabilization program extremely difficult to achieve. Higher taxes, designed to raise an additional £9,200,000, were imposed in the new budget introduced February 24.

See GREAT BRITAIN AND INDIA under *History*; WORLD WAR; also, ASBESTOS; CHEMISTRY under *Foreign*; PORTS AND HARBORS; WATER SUPPLY.

SOUTH AMERICA. A continent comprising 10 republics (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, and Venezuela) and three colonies (British Guiana, French Guiana, and Surinam). Total area, about 6,935,648 square miles; estimated population, 88,680,000 on Jan. 1, 1940.

SOUTH AUSTRALIA. See AUSTRALIA under *Area*.

SOUTH CAROLINA. A south Atlantic State. Area: 31,055 sq. mi. Population: 1,899,804 (1940 census); 1,835,937 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES AND SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Olin D. Johnston (Dem.), inaugurated in January, 1943, for a four-year term; Lieutenant Governor, Ransome J. Williams; Secretary of State, W. P. Blackwell, Attorney General, John M. Daniel. See PRISONS under *Prison Scandals*.

SOUTH DAKOTA. A west north central State. Area: 77,047 sq. mi. Population: 642,961 (1940 census); 552,728 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. **AGRICULTURE**; **MINERAL PRODUCTION**; **ROADS AND STREETS**; **SCHOOLS**; **SOCIAL SECURITY BOARD**; **TAXATION**; **UNIVERSITIES**; and **VITAL STATISTICS**. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article **ELECTIONS IN THE UNITED STATES**; also, for incumbents, **HOUSE OF REPRESENTATIVES** and **SENATE**.

Legislation. See the separate article on **STATE LEGISLATION**.

Officers. The Governor is M. Q. Sharpe (Rep.), inaugurated in January, 1943, for a four-year term; Lieutenant Governor, Albert C. Miller; Secretary of State, Mrs. L. M. Larsen; Attorney General, George T. Mickelson. See **BENTONITE**; **BERYLLIUM**; **STATE LEGISLATION under State Government and Employees**.

SOUTHERN RHODESIA. See **RHODESIA, SOUTHERN**. **SOUTH GEORGIA**; **SOUTH ORKNEYS.** See **FALKLAND ISLANDS**.

SOUTH-WEST AFRICA. A territory in Africa, administered by the Union of South Africa under a mandate from the League of Nations, dated Dec. 17, 1920. Total area, 322,394 square miles. The area of Walvis Bay (374 sq. mi.), owned by the Cape of Good Hope but administered by South-West Africa is included in the total. Total population (1936 census), 318,099, including 30,677 Europeans (9,632 German speaking) and 283,517 natives (estimated). Total estimated population (Jan. 1, 1940), 830,000. Chief towns: Windhoek (capital), 20,413 inhabitants including those in the surrounding district, Lüderitz, Keetmanshoop, Swakopmund, and Walvis Bay. Education (1941): 72 European schools and 6,295 pupils; 100 native schools and 5,781 pupils.

Production and Trade. Stock raising is the most important industry. The scarcity of water and low rainfall render agriculture unprofitable, except in the northern and northeastern parts of the country. Livestock (1939): 1,053,033 cattle, 4,937,802 head of small stock, 29,104 horses, 105,642 donkeys, and 1,802 mules. Butter output (1941): 8,135,919 lb. Karakul pelts exported in 1941 totaled 2,273,743. Minerals (1941 exports): diamonds 120,442 carats, vanadium 2,629 long tons, tin 170 long tons, gold, silver, tungsten, copper, lead, iron, and salt. Trade (1941): imports £2,730,965; exports £4,961,431 (official exchange rate of S.A.£ was \$3.98).

Communications. Railways (1941): 1,584 miles. The railway administration also operated 1,714 route miles of road motor services in the territory. Roads (1940): 20,000 miles.

Government. Finance (1941-42): revenue £1,101,735; expenditure £781,049, including loan expenditure of £53,277. South-West Africa is included in the South African Customs Union and a lump sum (approximately £182,000 annually) based on the customs and excise taxes on goods consumed in the territory is paid to the administration. The Governor is headed by an administrator (appointed by the Governor General), assisted by an executive committee and a legislative assembly of 18 members (12 elected and 6

nominated). Administrator, Col. P. I. Hoogenhout who succeeded Dr. D. G. Conradie at the end of March, 1943. See **GREAT BRITAIN, History**.

SOVIET UNION. See **UNION OF SOVIET SOCIALIST REPUBLICS**.

SOYBEANS. The production of soybeans for beans in the United States in 1943 was estimated by the U.S. Department of Agriculture, at 195,762,000 bu., an all-time record (being 5 per cent larger than the revised estimate for the 1942 crop of 187,155,000 bu.), nearly quadrupling the 1932-41 average of 51,571,000. A new high was again set in 1943 for acreage harvest for beans, 10,820,000 acres versus 10,008,000 acres in 1942. The reported acreage grown alone in 1943 was 14,762,000 acres and the interplanted acreage 2,604,000 or an equivalent of a total solid or grown-alone acreage of 16,064,000 acres. Acreage yield per acre was 18.1 bu. in 1943, 18.7 bu. in 1942, and 16.7 bu. for the ten years. The season average price per bushel (preliminary) received by farmers was \$1.81 and the value of production was estimated at \$353,960,000 versus \$1.61 and \$300,724,000 for 1942. The War Food Administration allocated 181,250 tons of soybean products for domestic foods for the year ending June 30, 1944, which is 12 times larger than the quantity consumed last year. Most of the soybean crop will be used for war purchases overseas, to meet the critical nutritional needs of occupied countries. The accompanying table lists the leading soybean States in 1943. See **AGRICULTURE under Commodity Credit Operations**; **HAY**; **PLASTICS**.

State	Value	Acrees Harvested	Production (bushels)
Ill.....	\$127,084,000	3,444,000	70,602,000
Iowa.....	70,798,000	2,017,000	39,332,000
Ohio.....	50,387,000	1,333,000	27,993,000
Ind.....	48,751,000	1,464,000	27,084,000
Mo.....	15,653,000	561,000	8,696,000
Minn.....	5,978,000	246,000	3,321,000
Ark.....	4,692,000	267,000	2,530,000
Kan.....	4,172,000	254,000	2,318,000
N.C.....	4,163,000	257,000	2,313,000
Miss.....	3,834,000	142,000	1,704,000
Mich.....	2,903,000	103,000	1,596,000
Va.....	1,901,000	96,000	1,056,000
Tenn.....	1,898,000	73,000	949,000
Wis.....	1,897,000	68,000	1,054,000
Neb.....	1,697,000	82,000	858,000
Ky.....	1,502,000	78,000	858,000
Penn.....	1,166,000	45,000	630,000

SPAIN. A state of southwestern Europe. Capital, Madrid.

Area and Population. Area, 196,607 square miles, including the Balearic Islands (1,935 sq. mi.) and the Canary Islands (1,279 sq. mi.). The 1940 census population was 26,251,188 (23,563,687 in 1930), including the Balearic Islands (411,273) and the Canaries (322,332). Vital statistics for 1941 (1940 figures in parentheses): Live births, 507,275 (627,303); deaths, 483,746 (424,399); marriages, 189,273 (215,467). Estimated populations of the chief cities on Jan. 1, 1941: Madrid, 1,088,647 (1,116,722 on Jan. 1, 1942); Barcelona, 1,081,175; Valencia, 450,756; Seville, 312,123; Zaragoza, 238,601; Malaga, 238,085; Bilbao, 195,186; Murcia, 193,731; Granada, 155,405; Cordoba, 143,296.

Colonial Empire. The principal divisions of the colonial possessions of Spain are listed in the accompanying table. For administrative purposes the Balearic Islands in the Mediterranean, the Canary Islands off the northwest coast of Africa, and the areas of Ceuta and Melilla in North Africa, are considered an integral part of Spain.

<i>Colony (Capital)</i>	<i>Sq. mi.^a</i>	<i>Population^a</i>
Spanish Guinea ^b (Santa Isabel)	10,124	120,000
Spanish Morocco ^c (Tetuán)	8,108	750,000
Western Sahara ^d (Villa Cisneros) . . .	110,036	110,038
Total	128,570	890,000

^a Estimated. ^b Includes Río Muni (on the mainland) and the islands of Fernando Po, Annobon, Corisco, Great Elobey, and Little Elobey. ^c Excluding Tangier (q.v.) which was occupied by Spanish troops on June 14, 1940, and incorporated with Spanish Morocco on Nov. 14, 1940. ^d Includes Río de Oro, Adrar, and Ifni.

Defense. As of Jan. 1, 1941, Spain had an active army of about 200,000 men, trained reserves of 1,300,000 men with inadequate equipment, an active air force of 5,000 men, and about 5,000 trained air force reserves. There is compulsory two-year military service. The navy consists of 6 cruisers, 13 destroyers, 4 sloops, 6 torpedo boats, 6 minelayers, 6 submarines, and various auxiliary vessels.

Education and Religion. The 1930 census showed 45 per cent of the adult population as unable to read or write. At the end of the civil war in 1939, the Roman Catholic Church was reestablished as the official religion. The religious orders recovered their pre-republican legal status, properties, state subsidies, teaching rights, jurisdiction over cemeteries, and other privileges. In 1935 there were 4,720,260 pupils in 42,766 elementary schools, 130,752 pupils in 111 secondary schools, and 31,905 students in 11 universities.

Production. Spain is predominantly agricultural. Mining, manufacturing, and fishing are important secondary industries. Estimated yields of the chief crops in 1942 were (in metric quintals of 220.46 lb.): Wheat, 29,660,400; oats, 6,556,450; rye, 5,366,894; barley, 18,182,200; corn, 7,025,940; rice, 1,456,340; potatoes, 33,823,100. The production of sweet oranges in 1942-43 was 500,000 metric tons; olive oil, about 200,000 metric tons; wine (in 1943), 16,000,000 hectoliters. Farm animals in 1939 included 2,729,200 cows, 505,300 horses, 1,053,500 mules, 7,373,300 asses, 14,045,100 sheep, 4,076,900 goats, and 2,945,500 swine. Fisheries production in 1941 totaled 442,823,727 kilograms valued at 988,823,729 pesetas.

Mineral production in 1941 was (metric tons): Coal, 9,623,302; lignite, 815,000; iron ore, 1,641,000; pig iron, 540,000; steel ingots and castings, 684,000; copper, 14,400; lead, 27,453; zinc, 11,589; tungsten ore, 504 (252 in 1940); manganese ore, 9,923; quicksilver (exports), 1,842 in 1940; aluminum, 3,000 in 1940. The chief manufactures are cotton textiles, paper, glass, cement (1,470,000 metric tons sold in 1940), wood-pulp (output, about 9,000 metric tons in 1940), rayon (7,496,000 lb. in 1940), explosives, etc.

Foreign Trade. Spain's foreign merchandise trade in 1942, with comparative 1941 figures in parentheses, was (in gold pesetas): Imports, 606,000,000 (549,600,000); exports, 631,200,000 (520,800,000). The 1941 imports included foodstuffs to the value of 137,840,000 gold pesetas; manufactured goods, 170,783,000; raw materials, 127,694,000. Exports included: Foodstuffs, 203,657,000 gold pesetas; raw materials, 111,473,000; manufactured goods, 88,607,000.

Finance. The ordinary budget for 1943 estimated receipts at 9,439,859,796 pesetas (7,869,778,147 in 1942) and expenditures at 9,456,475,296 pesetas (7,880,194,669 in 1942). The War Ministry received 28 per cent of the 1943 appropriations. Total foreign debt on June 30, 1940: 1,200,000,000 pesetas. The total acknowledged public

debt on Jan. 1, 1942, was 28,901,500,000 pesetas. This was exclusive of the Civil War debt to Italy (funded in May, 1940, at 5,000,000,000 lire) and Germany (estimated in 1940 at 300,000,000 marks). The peseta, equivalent to \$0.0913 at the official rate, exchanged at an average nominal value of \$0.0932 in 1940 and \$0.0913 in the first half of 1941.

Transportation. In 1942 Spain had approximately 10,497 miles of railway lines, over 71,600 miles of roads, and air lines connecting Madrid and the other principal cities with Berlin, Rome, the Canary and Balearic Islands, with London and New York via Lisbon, Portugal, and with Tetuán and Melilla in North Africa. The railways in 1940 carried 168,000,000 passengers (about 65 per cent more than in 1939) and 40,500,500 metric tons of freight. In January, 1941, all standard-gauge railways were placed under direct Government control. On Jan. 1, 1943, the Spanish merchant fleet aggregated 1,035,000 gross tons. Barcelona, Bilbao, Seville, and Cadiz are the chief ports. During 1942, 2,423 ships entered Barcelona carrying 1,346,000 metric tons of merchandise and 55,000 travelers.

Government. As a result of the Civil War of July 17, 1936, to Apr. 1, 1939, the republic established in 1931 was replaced by a Fascist dictatorship, headed by Gen. Francisco Franco as Leader (Caudillo) of the Empire, Chief of State, Commander-in-Chief of the Army, Premier, and head of the Falange Española (government party), in which were merged all political groups supporting the Franco regime. These pro-Franco groups included the Falangists (Fascists), the Requetés (Carlists), the Clericals, and the Monarchists. All other political parties were outlawed. General Franco exercised his dictatorial powers either directly, or through his Cabinet, or through the governing organs of the Falange Española. The Falange organs consisted of a National Council of about 100 members, representing the various pro-Franco political groups, and a Political Council of 19 which served as the permanent governing board of the party. Franco was President of the National Council and appointed its Secretary-General. The National Council was empowered to determine the structure of both the state and the government party, control syndical organizations, etc. On Sept. 3, 1942, Franco also took over the Presidency of the Political Council from his brother-in-law, Ramon Serrano Suñer, leader of the Falangists. By a decree of July, 1942, Franco reestablished the Cortes (national assembly) on Fascist lines. It included all members of the Cabinet, the governing organs of the Falange Española, mayors of provincial capitals, captains-general of the army, presidents of the academies, and other leading officials and supporters of the regime. For developments during 1943, see below.

HISTORY

Anti-Axis Trend Accelerated. As described in the preceding YEAR BOOK, 1942 saw a slow but perceptible trend within the Franco regime away from both pro-Axis "nonbelligerency" and the cruelly repressive internal policies dictated by extremist elements within the Falange Española. During 1943, this trend was greatly accelerated as a result of the steady progress made by the United Nations in their struggle with the Axis Powers.

The overthrow of Mussolini on July 25 and the collapse of the Fascist regime in Italy had particularly powerful repercussions in Spain. General Franco's Nationalist state had far more in common

with Fascist Italy than with Nazi Germany, and the ease with which Italian fascism crumbled underscored the weakness and impermanence of the Spanish dictatorship. It speeded up the process of disintegration within the Nationalist movement—under way since 1939—and breathed new life into opposition forces.

Within the regime, the opposition rallied behind the demand for restoration of the monarchy. Not only the monarchists, but also the adherents of capitalism, moderate nationalism, conservatism, and Christian liberalism pressed this solution upon Franco with growing insistence. Meanwhile exiled adherents of the republic, defeated and dispersed in the bitter civil war of 1936–39, launched a vigorous campaign for their return to power under the 1931 republican constitution. There were stirrings, too, among those supporters of the outlawed Leftists parties still in Spain who had survived the civil war and its terrible aftermath.

Falangism "Liberalized." Franco sought by various compromises to conciliate the opposition elements inside the Nationalist ranks without sacrificing his dictatorship or the basic principles of his Falangist state. The new Cortes (national assembly) that Franco had promised on July 17, 1942, convened the following March. The 400 members, sworn in without provision for the presence of the press or the public at large, heard a presidential address by Señor Bilbao condemning liberal regimes and "stupid parliaments" as "fatal instruments of Spain's decadence."

In December the Secretary-General of the Falange, Gen. José Luis de Arrese, with Franco's approval, announced tentative reforms designed to "liberalize" the regime. He indicated that the armed Falangist militia might be abolished, that the Falange would surrender to the regular police the job of policing the nation, and that the press might be given greater freedom to comment upon "important issues." These measures were considered wholly inadequate by the monarchists and their allies.

Political Amnesty Extended. The Generalissimo also sought to conciliate republican sentiment by successive releases of political prisoners. Four years after the end of the civil war, a decree of March 31 authorized conditional liberty for political prisoners serving sentences of 20 years or less. The prisoners were released in batches after investigation. On August 7 the Falange party organ *Arriba* announced that Spain was nearing the end of a "sad, repressive period" against the republicans. On September 30 Franco granted liberty to all political prisoners over 70 years of age, and on December 20 he authorized amnesty for prisoners confined five years or more who had behaved well in prison. All releases were conditional on continued good behavior, and none were given to persons guilty of killings other than in battle. Death sentences of 200 political prisoners were commuted on Christmas Day and on December 28 it was officially indicated that 800 others still under sentence of death would receive commutations.

The first official figures on the numbers of political prisoners in Spanish jails were given out December 28 by Angel Sanz, director general of prisons. He said there were 270,719 prisoners on Jan. 7, 1940, and that all except 34,000 had been released, executed, or died in prison by the end of 1943. He indicated that those remaining in jail would be released by the following March.

Symptoms of Unrest. Evidences of persistent internal dissension cropped out with increasing frequency throughout the year. On March 16 the

Government published a law making all "crimes and transgressions that have clear repercussions in public life" the equivalent of acts of rebellion and therefore subject to military trial and the death penalty. The law was announced as a measure for dealing with rumor-mongers, conspirators, unlicensed possessors of firearms, saboteurs including political strikers, and "those who injure persons or cause damage to property with political, social, or terrorist motives."

This harsh decree was promulgated two days after the reported flight to Portugal of about six high Spanish army officers involved in a monarchist conspiracy against the Franco regime. On May 29 it was announced that Col. Valentin Galarza Morante, former Secretary-General of the Falange and chief of the Falangist militia, had been retired from the general staff of the army at his own request. A reputed monarchist, he had been dropped as Franco's Minister of Interior on Sept. 3, 1942 (see 1943 YEAR BOOK). In May and again in June reports reached London of fires and explosions at the Spanish naval base at Ferrol, attributed to saboteurs. Numerous arrests were reported to have followed these incidents.

Don Juan Breaks with Franco. It was revealed in June that Don Juan, third son of King Alfonso XIII and leading claimant to the throne, had addressed a letter to Franco from Switzerland stating that he would not accept restoration of the monarchy under the existing regime and calling for the adoption of a Spanish foreign policy based on real neutrality. On June 22 a petition for restoration of the monarchy under Don Juan was presented to Franco by 29 members of the Cortes and other prominent figures, including the Duke of Alba, Ambassador to Great Britain. The move was believed to have strong British support. Don Juan, a great-grandson of Queen Victoria, had served in the British navy and was said to have pro-British sympathies.

Franco made a long-awaited public reply to the monarchist demands before the Falangist National Council on July 17. While not opposing the possibility of restoration of the monarchy, he insisted that the monarchy must accept the Falange and its program as "the only just and true solution" of Spain's political problem. Moreover, he declared, the monarchy must never serve as a tool for foreign propaganda. He made it plain that he would tolerate no political attempts to change his Government by monarchist or any other sources. This brought Franco and Don Juan to the parting of the ways. According to a London report of August 30, the Prince demanded Franco's resignation as Chief of State "for the good of Spain." Negotiations for Don Juan enthronement under Franco's auspices were said to have been ended.

Falange on the Defensive. The rising tide of opposition to Franco's dictatorship was frankly admitted on October 4 in a government-sponsored broadcast. Quoting the Spanish periodical *Español* on the subject of "hostile maneuvers" against the Government, the broadcast asserted that "many currents of varied political types, and sometimes even representing political opposites, are all co-operating in a struggle against the legitimate regime."

The Government sought to shatter this newly formed opposition by playing upon the anti-Communist and anti-Masonic sentiments of conservatives and Catholic middle-class elements. On October 31 a semi-official organ announced the discovery of a "Spanish Masonic plot" to overthrow Franco and place Don Juan on the throne as a

preliminary to the restoration of the republic. The plot was said to have been organized by Diego Martínez Barrio, former Premier and President of the last Cortes under the Republic. Falangist editorials warned that the overthrow of the Falange and the return of Don Juan were ardently desired by Communists, Masons, and republican exiles.

This tactic failed to deter the opposition. In mid-November it was announced that eight of the nine lieutenant generals forming Franco's Superior War Council had formally demanded restoration of the monarchy in a letter to War Minister Gen. Carlos Asensio. There were reports of one or two other moves among the army officers to force a fundamental reorganization of the Franco regime. These developments formed the background for the proposals for "relaxation" of the Falange's tight grip on Spanish internal affairs, made by Secretary-General de Arrese on December 22.

Neutrality Debate. A major cause for the dissatisfaction among Franco's former supporters was the conviction that a United Nations victory was now assured and that the Generalissimo's pro-Axis non-belligerency endangered Spain's position in world politics and trade after the conflict. In some quarters it was feared also that Franco's intransigent totalitarianism would facilitate the restoration of the republic and the eventual triumph of the leftist cause.

The danger of a German invasion of Spain to attack Allied communications through the Strait of Gibraltar remained acute during the first four months of 1943. This danger gave point to Franco's conciliatory policy toward the Axis as well as to Anglo-American efforts to keep Spain out of the conflict by supplying her with oil and other essential supplies. In a series of speeches during this period, Franco attacked communism and repeated his previous denunciations of liberalism and democracy.

The progress of Allied offensives in Russia and North Africa led the Franco Government beginning in mid-April to initiate a peace offensive along lines dictated by the interests of both the Axis and the Spanish dictatorship. On April 16 Foreign Minister Gen. Francisco Gomez de Jordana offered Spain's good offices in concluding "a speedy and just peace" in order to avert the danger of communism to all countries. This contrasted with the Roosevelt-Churchill demand at the Casablanca Conference in January for "unconditional surrender" of the Axis Powers. In a speech at Almeria on May 9 General Franco declared that it was "senseless to delay the peace" as the war had reached a stalemate and neither side could hope to destroy the other. This was followed on June 5 by publication of the Spanish Government's four-point proposal for "humanizing" aerial bombing, which was now devastating cities.

With the Italian Government on the verge of capitulation, the Franco Government responded to growing pressure for more strict neutrality from within Spain and from London and Washington by announcing unofficially on August 22 that Spain was out of the war "by its own free decision . . . despite movements of sympathy or compassion in certain sections of the population." On October 4 Franco in an address to the Falange National Council substituted the phrase "vigilant neutrality" for the customary "nonbelligerency." This new policy was affirmed when Portugal on October 12 granted Great Britain the use of military bases in the Azores, although Portugal and Spain in 1942 had concluded an agreement to maintain the neutrality of the Iberian peninsula.

Neutrality Violations. These affirmations of neutrality were accompanied by continued active aid to the Axis in various ways short of war. A Spanish infantry division of some 14,000 men lost 2,133 men killed up to August 7 in fighting on the Russian front, according to a Madrid report. A considerable part of the division was later repatriated to Spain, but some thousands of Spaniards were incorporated in the German Army at Franco's request and continued to fight the Russians.

Moreover there was strong evidence that Spanish ships were supplying German submarines in the Atlantic, despite repeated denials by official spokesmen of the Franco Government. An open letter charging that Spanish policy was completely favorable to the Axis was circulated in Spain late in the year by supporters of the Spanish rightist leader, José María Gil Robles, who was living in Portugal. He accused the Government of giving supplies to German submarines in Spanish waters, of placing bombs in British ships calling at Spanish ports, and of installing wireless stations near Gibraltar to "advise German submarines of movements of Allied convoys . . ."

The Spanish Government also refused to turn over to the Badoglio Government or the Anglo-American powers a number of Italian warships and merchantmen that took refuge in Spanish ports at the time the Badoglio regime capitulated to the Allies. Spain continued to supply the Reich with tungsten and other vital war minerals in return for promises to pay which seemed increasingly unlikely to be fulfilled. Moreover Franco's Cabinet completed its seizure of the Tangier International Zone on March 4 by taking over from the French Ministry of Posts and Telegraphs the postal, telegraph, and telephone services of Tangier. This latter move brought an "energetic protest" from Gen. Henri Honoré Giraud, then High Commissioner of French North Africa. There was also strong suspicion in Washington that the Franco regime had a finger in the pro-Falangist and anti-democratic military revolt of June 4 in Argentina (q.v.).

Further incidents that occurred late in the year led the British and U.S. Governments to reconsider their conciliatory policy toward Spain. On October 18 the Franco Government sent a message of congratulation to the newly established Japanese puppet regime in the Philippines (q.v.). German agents operating in Spain with Franco's consent made repeated attempts to create trouble between Madrid and the democracies that would react in Germany's favor. These agents were believed to have stirred up Falangist mobs which stoned the British Embassy on several occasions. On November 19 uniformed members of the Falange broke into the British vice consulate at Zaragoza and insulted the vice consul and members of his family. A similar incident occurred in the American Embassy in Madrid December 19. Two members of the Falangist Blue Division, newly returned from the Russian front, invaded the Embassy library, tore down posters, and denounced a number of Spaniards who were reading there.

The Franco Government offered apologies for these incidents, but year-end indications were that the United States and Great Britain were ready to resort to stronger measures to end Spanish assistance to the Axis.

Republican Exiles Organize. Under the leadership of Diego Martínez Barrio, the republican leaders in exile in Mexico began in March to organize a movement for the restoration of the republic. In April Martínez Barrio and Gen. José Miaja, com-

mander of the Republican forces in Madrid during the civil war, journeyed to Montevideo for conferences with other Spanish exiles.

Formation of a united front to proceed with this program was announced in Mexico City November 21 by representatives of the four leading Spanish Republican parties—the Socialists, Izquierda Republicana, Unión Republicana, and the Catalan Esquerra Republicana and Acció Catalana. On November 26 a Spanish Committee of Liberation was formed by members of these parties to seek United Nations' support for restoration of the republic. Martínez Barrio was named head of the Committee and Indalecio Prieto, Socialist leader, secretary. On December 23 the Committee appealed to the United Nations Governments to permit a meeting of the Republican Cortes to "accelerate the restoration of the Spanish Republic." Of the 450 members of the last Republican Cortes, 102 were in Mexico, at least 126 were known to have died, and the remainder were scattered throughout Latin America and Europe. Deputies of the right-wing Accion National party were in exile with Gil Robles in Portugal.

The Spanish Committee of Liberation excluded from its united front the Spanish Communist party, the Syndicalists, the Federal Republican party (a dissident Socialist faction), the Catalanian Unified Socialists, and the Basque Nationalists. Representatives of these groups were reported to be opposed to the plan for convoking a session of the Cortes in Mexico. All of the pro-democratic republican parties were apparently opposed to restoration of the monarchy and some of their representatives were strongly critical of Anglo-American policy toward Spain.

See ARGENTINA, CUBA, GERMANY, GREAT BRITAIN, MOROCCO, PERU, PORTUGAL, and TANGIER under *History*; BRIDGES; RAPID TRANSIT; REFUGEES; SPANISH LITERATURE.

SPANISH-AMERICAN LITERATURES. Since the outbreak of the Spanish Civil War, in the summer of 1936, we have had great difficulty in receiving literary works for the annual articles on SPANISH-AMERICAN LITERATURES and SPANISH LITERATURE. Spanish refugees in Mexico have found a warm welcome and help in continuing their literary labors. The Mexican Government favored the establishment of *La Casa de España en México*, *Fondo de Cultura Económica*, and *El Colegio de México*. These institutions have devoted themselves to publishing, and republishing, important works, which have finally reached us, and we give an account thereof under Mexico, in this same article, and under SPANISH LITERATURE.

Of general interest are the following titles: Dudley Fitts, Editor, *Antología de la poesía americana contemporánea*; *Anthology of Contemporary Latin American Poetry* (226 poems, 95 authors, representing all Latin American republics and Puerto Rico with unrhymed translations of all poems printed beside the originals); Samuel Guy Inman, *Latin America: Its Place in World Life* (by an author who, for 30 years, has held constant communion with leaders of thought in all the countries of the continent).

Argentina. Francis Herron's *Letters from the Argentine* is a refreshing book by a provincial North American newspaper editor writing from and about provincial Argentina, after living there for nine months. Books have not reached us from Argentina in any satisfactory numbers but we list what we have received.

Drama. Eugenio Navas, *Federico García Lorca*

(a very emotional play, based on the execution of the Granadine poet by the Falangists in 1936).

Erudition. Alfredo Coviello, *Una página de historia en la naciente filosofía argentina, y otros ensayos críticos* (eight philosophical essays, including a tribute to the great Argentine philosopher, Alejandro Korn); Newton Freitas, *Ensayos Americanos* (twenty essays on writers, beginning with the author's friend, the recently deceased Ecuadorian story teller, José de la Cuadra).

Fiction. María Villarino, *Pueblo en la niebla* (short stories with regional backgrounds); Arturo Lorusso, *Fuego en la montaña* (a novel finished in 1933, which won an Argentine national prize in 1937, and is now published by Zig-Zag in Chile for continental circulation). Carlos María Ocantos, *Entre Naranjas* (the second novel of the second series of *Novelas Cortas* by the Argentine former diplomat who still lives in Spain), and *El Avionema del Diablo*, (third in the second series of *Novelas Cortas*).

Verse. Carlos Obligado, *Los poemas de Edgar Poe, Traducción, prólogo y notas* (a splendid piece of work); José Pedroni, *El pan nuestro* (sober, beautiful poems, full of human sympathy).

Bolivia. **Erudition.** Enrique Finot, *Historia de la Literatura Boliviana* from its origins to the present—an excellent piece of work. Adolfo Costo du Rels, *L'oeuvre spirituelle de la France*, published in Lyons, which won a 10,000-franc prize from the French Academy.

Fiction. Porfirio Díaz Machicao, *Vocero* (a splendid novel about a man who founds a newspaper in order to be the mouthpiece of justice and who is set upon by every influence that wishes to hide wrongdoing).

Chile. **Erudition.** Gmo. Rojas Carrasco, *Chilenismos y Americanismos* (1,504 words studied in their relation to Spanish and to Spanish-American speech, dedicated to the prince of Chilean philologists and lexicographers, Miguel Luis Amunátegui y Reyes); Eduardo Solar Correa, *Las Tres Colonias* (a very important posthumous work by the great historian, who found, in the three centuries of colonial rule, three distinct sets of social conditions); Arturo Torres-Rioseco, *Seis Novelistas de la ciudad* (second volume of his *Grandes novelistas de la América hispana*, the first having treated *Novelistas del campo*); and *The Epic of Latin-American Literature*, a very fine and mature piece of work which treats Latin-American literature as a unit developed by the same mass set of circumstances.

Fiction. Alberto Blest Gana, *Durante la reconquista*, 2 volumes (the author's last and probably his best novel); Luis Henríquez Castillo, *La Octava maravilla* (a thesis novel); Mari Yan, *Las Cenizas* (a novel in which the authoress, true to form, justifies the statement by Carlos Reyles that she "transforms this sordid, vulgar world into a resplendent world of artistic meaning"); Armando Zegri, *La Mujer Antiséptica* (a careful, kindly, objective study of United States character).

Verse. Pablo de Rokha, *Morfología del espanto* (which, continuing the style shown in his first book *Gran temperatura*, is stimulating although contradictory).

The Chilean Academy is always very active. The *Boletín de la Academia Chilena, Correspondiente de la Española*, Tomo VIII, Cuadernos XXIX y XXX, contains valuable reports on the academy's recent activities, reception of new Members, with their Reception Discourses, and a tribute to the Academy's Director, the beloved scholar Miguel Luis Amunátegui y Reyes.

Colombia. **Erudition.** Antonio Gómez Restrepo,

Historia de la Literatura Colombiana, Vol. III, completed, despite increasing difficulty with his sight, by the learned diplomat, poet, scholar, and academican. This third volume brings us down to Doña Josefa Acevedo de Gómez, the poetess (1803-61). The fourth and concluding volume is already on the way.

Costa Rica. *Drama.* Alfredo Saborío Montenegro, *La Virgen de Los Angeles: auto místico*; and Juan Santamaría: *drama heroico*.

Erudition. Mary B. MacDonald and Dwight H. McLaughlin, *Vida y Obras de Autores Puertorriqueños*, Tomo I.

Cuba. *Erudition.* The Archivo José Martí continues publishing and we have received numbers five and six. Orestes Ferrara, *Mis relaciones con Máximo Gómez* is a fine example of personal memoirs. Emilio Menéndez, *Tres Reflexiones sobre el amor*, contains essays on love, ontologically, psychologically, and sociologically considered. Fernando Ortiz for many years has been interested in the welfare of the Negroes in Cuba; this has led to his being selected by the authorities in the Pan-American Union to write number seven (October, 1943) of "Points of View," published by the Division of Intellectual Cooperation. The specific title assigned him was, "On the Relations between blacks and whites."

Fiction. Lino Novás Calvo, *Un dedo encima* (cuento that won first prize in the Hernández-Catá competition for short stories) and *La Luna Nona* (a collection of short stories, some of the best of which recognize Cuba's heritage from the Negro race).

The Academia Nacional de Artes y Letras de Cuba has brought its *Anales* up to December, 1942. As usual there is much of importance to be found in its pages. This Academy is always very active in all its five sections.

Dominican Republic. *Erudition.* Pedro Enríquez Ureña, *El español en Santo Domingo* (a careful study of the Castilian language as developed in the Dominican Republic).

Verse. Hector Incháustegui Cabral, *Rumbo a la otra Vigilia* (somewhat violent, but attractive, verse).

Academia de la Historia. With its nonagenarian director, the beloved Don Federico Henríquez y Carvajal at the helm, the academy's official bi-monthly review *Clio* appears regularly and carries its usual quota of documentary material concerning the past history of the Dominican Republic and also of other nationalities in the West Indies.

Ecuador. *Erudition.* Francisco Javier Eugenio de Santa Cruz y Espejo, *El Nuevo Luciano de Quito* (Biblioteca de Clásicos Ecuatorianos), the literary essays of an 18th century physician; Augusto Arias, *Literatura General*, a book for secondary schools by a real poet and a cultured essayist.

Fiction. G. Humberto Mata, *Sanagüín*, a novel dealing with the Indian problem in such countries as Peru, Ecuador, and Bolivia, laying bare stark cruelty.

Verse. Pablo H. Vela Egüez, *El Arbol que canta* (*Poesías*).

Guatemala. *Erudition.* Rafael Arévalo Martínez, *Nietzsche el Conquistador* (*La doctrina que engendró la segunda guerra mundial*), analysis and exposition of Hitler's interpretation of Nietzsche and Hebbel, as compared with the doctrine of Christ, and *Influencia de España en la Formación de la Nacionalidad Centroamericana*, a study of Christian influence in the ideals of Central America; José María Bonilla Ruano, *Mosáico de voces y locuciones viciosas*, 288 poems using words that

are unacademic, which are explained in footnotes; David Vela, *Literatura Guatemalteca*, containing "Notas de prólogo" by César Brañas.

Fiction. Flavio Herrera, *El Tigre*, a strong, powerful picture of Guatemala: the land and all that composes it is "El Tigre."

Mexico. The following works were published under the auspices of *La Casa de España en México*, *Fondo de Cultura Económica*, and *El Colegio de México*. The works are all of real worth. *Danzas populares mexicanas: Danzas de los Concheros en San Miguel de Allende* (with historical study, by Justino Fernández; collection of musical texts and modern transcriptions, by Vicente T. Mendoza; and eight illustrations full page by Antonio Rodríguez Luna); Genaro Estrada, *Bibliografía de Goya* (a work already well known in MS. form, unfinished because the author became blind and later died; published as he left it); Francisco Giner de los Ríos, *Pasión Primera y Otros Poemas* (dainty verse, the title poem being devoted to the author's first poem); J. B. Igúñiz, *Disquisiciones Bibliográficas*, (important information concerning important personages, books, newspapers, and libraries); Adolfo Menéndez Samará, *Fanatismo y Misticismo-Su valor social—y Otros Ensayos* (a study of the difference between the mystic and the fanatic); J. M. Miquel y Vergés, *La Independencia Mexicana y la Prensa Insurgente* (a study of the role played by the insurgent press in the Mexican War for Independence); Carlos Pellicer, *Recinto y Otras Imágenes* (erotic verses); Alfonso Reyes, *Pasado Inmediato, y otros ensayos* (charming, scholarly chats about Spanish and Spanish-American literary matters and literary personalities); also by the same author, *La Antigua Retórica* (not a continuation of the earlier *La Crítica en la Edad Ateniense*, but a further development along a different line), and *Capítulos de Literatura Española* (fourteen chapters on outstanding authors and works); Justo Sierra, *Evolución Política del Pueblo Mexicano*, (2d. ed., with prologue by Alfonso Reyes); Julio Torri, *De Fusilamientos* (brief sketches, with sardonic tone, on firing-squad executions, and other incidents, well-observed, of Mexican life); Rodolfo Usigli, *Itinerario del Autor Dramático, y otros ensayos* (exposition of the problems of the teatro in all its aspects from writer to producer, actor, and public); Xavier Villaurrutia, *Textos y Pretextos* [*Literatura, Drama, Pintura*] (by the outstanding prose writer, poet, and critic, of the group called "Contemporáneos"); Silvio Zavala, *Ideario de Vasco de Quiroga*; Leopoldo Zea, *El Positivismo en México*.

Other Mexican works that have reached us from other sources are as follows:

Drama, Xavier Villaurrutia, *Autos Profanos* (five short plays).

Erudition. Ermilo Abreu Gómez, *Heroes Mayas: Zamná, Cocom, Canek* (beautiful treatment of the early Mayan legends and incidents of their contact with the representatives of Christianity); Gerard Decorme, S. J., *La Obra de los Jesuitas Mexicanos durante la época colonial*, Tomo 2 (a very important work); José Romano Muñoz, *El secreto del bien y del mal*, 2d. ed. (a fine textbook on philosophy). Ezequiel Padilla, *Tres discursos en Río de Janeiro* (speeches delivered by the Mexican Minister of Foreign Affairs at the Pan-American Conference held in Rio in January, 1941); Samuel Ramos, *Historia de la Filosofía en México* (a panoramic survey of Mexican philosophy from the Aztecs to the present); Alfonso Reyes, *La Experiencia Literaria*, and *Ultima Tule* (exquisite, profound essays, considering the Americas not as continents but as an aspiration); Darío Rubio, *El Nacional Monte de*

Piedad; lo que fué en sus orígenes; lo que ha sido en su desarrollo; lo que es en la actualidad, (historical account of a valuable institution of Mexican life, founded in 1775).

The Secretariat of Public Instruction has begun a series *El Pensamiento de América*, of which four volumes have reached us: I.—*Vasconcelos*, presenting a great Mexican thinker; II.—*Martí*, a great Cuban; III.—*Montalvo*, a great Ecuadorian; IV.—*Rodó*, a great Uruguayan. Octavio Vezar Vázquez, Secretary of President Manuel Ávila Camacho, in the field of education, has issued several important tracts in that field: *Mensaje a la Nación Mexicana*; *Carta a la Madre y al Maestro*; *Hacia una escuela de Unidad Nacional*; *La Escuela Mexicana*; y *Los Problemas de la Guerra y de la Paz*, (Palabras a los jóvenes); *La Esencia de la Educación Mexicana*.

Fiction. José Revueltas, *El Luto Humano*, adjudged the best novel written by a Mexican in the recent *Concurso Latino-Americano de la Novela*.

Verse. Xavier Sorondo, *Estampas de Torería*, ten poems descriptive of sundry phases of the bullfight, each accompanied by a telling illustration by Ruano Llopis.

Nicaragua. Erudition. The *Revista de la Academia de Geografía e Historia de Nicaragua*, Tomo V, No. 1, contains interesting materials concerning the diplomatic relations between the United States of America and Nicaragua, also concerning the last activities of Gen. Francisco Morazan and several chapters, by M. A. Alvarez, concerning *Los Filibusteros en Nicaragua*, William Walker among them.

Panamá. Erudition. *Antología del Canal, 1914-1939*, is a history of the Panama Canal from its inception under DeLesseps until 1939, with numerous maps and illustrations.

Peru. Erudition. Luis Alberto Sanchez, *Un Sudamericano en Norte América—Ellos y Nosotros* (an unusually well-balanced book that will do good to both the southern and the northern phases of Pan Americanism); and *El pueblo en la revolución Americana* (a profound study of what underlay the whole revolutionary movement of the continent—restlessness of leaders and of the people; a real contribution to Spanish-American history); Federico Schwab, *Bibliografía Etnológica de la Amazonia Peruana, (1542-1942)*, some 500 items accumulated before the National Library of Peru suffered its second complete destruction, this time by fire.

Fiction. Arturo D. Hernández, *Sangama*, (a long, but thrilling novel of the Amazonian jungle, which is the chief character of the novel, illustrated by Alejandro Torres).

Puerto Rico. Erudition. José A. Balseiro, *El Vifia, Ensayos, Tomo III* (Biblioteca de autores puertorriqueños); Tomás Blanco, *Prontuario histórico de Puerto Rico* (awarded first prize of the Institute of Puerto Rican Literature); Vicente Géigel Polanco, *El despertar de mi pueblo* (in which the author is more confident than in previous books on the subject that the people of Puerto Rico are awake to their destiny); Samuel R. Quifiones, *Temas y letras* (a useful volume on Puerto Rican literary achievements).

Fiction. Enrique A. Laguerre, *El 30 de Febrero, vida de un hombre interino*, (Biblioteca de Autores Puertorriqueños).

Verse. Evarista Ribera Chevremonite, *Tonos y formas* (Biblioteca de Autores Puertorriqueños), *Poesías*. Carlos Vallejo (h.), *Versos de Montelila*.

Uruguay. Erudition. Samuel Ramos (editor), *Rodó; Prólogo y selección* (a welcome addition to

the available material concerning Uruguay's profound thinker and exquisite stylist); Víctor Pérez Petit, *Las tres catedrales del naturalismo* (Volume V, of the *Obras Completas* published by the nation, treating the Goncourts, Zola, and Daudet), also *Lecturas*, essays on Spanish writers, and *De Weimar a Bayreuth*, (two very stimulating and fascinating studies).

The President of Uruguay has asked the Minister of Public Instruction to organize a Uruguayan Academy of Letters to consist of twenty prominent Uruguayan literary men and one woman, Juana de Ibarbourou.

Venezuela. Drama. Aquiles Certad, "*Lo que le faltaba a Eva*" (a modern three-act comedy set in Caracas); Antonio Guzmán O., *De ayer a hoy*, (a play by a laborer "done in moments stolen from his hours of rest," who claims the play is not merely a picture of misery and prostitution, but of the action of the bourgeoisie during the period of Dictatorship).

Erudition. Antonio Reyes, *Caciques aborígenes venezolanos* (careful study of the Indian population and its folk-lore, beautifully illustrated); Oscar Rojas Jiménez, *Tierra y hombres* (reportajes líricos).

Fiction. Arturo Croce, *Chimó y Otros Cuentos* (realistic scenes from Venezuelan peasant life by a young poet, published in the fine series *Cuadernos Literarios de la Asociación de Escritores Venezolanos*); Alejandro García Maldonado, *Uno de los de Venancio* (a story laid in the early days of Venezuela when conditions of life were like the rip-roaring days of our Far West).

Verse. Francisco Caballero Mejías, *Selección Poética* (Asociación de Escritores Venezolanos. Cuadernos Literarios No. 30.) See COORDINATOR OF INTER-AMERICAN AFFAIRS.

JOHN D. FITZ-GERALD.

SPANISH GUINEA. A Spanish colony on the Gulf of Guinea, West Africa, comprising two districts: (1) the island of Fernando Po (810 sq. mi.) and (2) Continental Guinea, made up of the mainland area of Río Muni (9,470 sq. mi.) together with the archipelago of islands from Great Elobey to Little Elobey and Corisco and the island of Annobon. Total area, 10,424 square miles. Total population (1940 estimate), 120,000. Chief towns: Santa Isabel, the capital (on Fernando Po), and Bata, a seaport and principal town of Río Muni.

Production, etc. Chief products: cocoa, palm oil, coffee, sugar, tobacco, indigo, vanilla, kola nuts, and timber (ebony, oak, logwood, mahogany). Roads (1940): 304 miles. The colony is administered by a governor general, assisted by a deputy governor and a secretary general. Each of the territories into which the colony is divided (3 for Fernando Po and 10 for Continental Guinea) is under a territorial administrator.

SPANISH LITERATURE. World conditions during 1943 made it more difficult than ever to assemble materials for such articles as these. We mention what we have received, with no pretension of covering the field adequately.

For information about the first Spanish works that we list, see the opening remarks in the article *Spanish-American Literatures; Mexico*. The following, listed alphabetically by authors, are the Spanish works published through the patronage and kindness of the Mexican Government under the three agencies mentioned (La Casa de España en México, Fondo de Cultura Económica, and El Colegio de México):

J. de Acosta, *Historia Natural y Moral de las Indias* (an important work by a Jesuit missionary who succeeded, in 1571, in having himself sent to the New World); J. Bal y Gay, *Romances y Villancicos españoles del siglo XVI, dispuestos en edición moderna para canto y piano. Primera Serie* (dedicated to the Mexican composer, Carlos Chávez); Fray Bartolomé de las Casas, *Del único modo de atraer a todos los pueblos a la verdadera religión*; E. Diez-Canedo, *El Teatro y sus enemigos* (a charming book of personal recollections of the birth of moving pictures); J. J. Domenchina, *Poesías escogidas* (1915-39); J. de la Encina, *Goya: su mundo histórico y poético*; J. Gaos, *La Filosofía de Maimónides* (a lecture given in 1935 on the seventh centennial of the birth of the philosopher); J. Gaos-Francisco Larroyo, *Dos ideas de la filosofía* (resulting from a friendly competition between the professor from the Universidad Central de Madrid and the professor of the Universidad de México); J. Gaos, *Antología Filosófica-La Filosofía Griega* (first of a series which is to include anthologies of all Occidental philosophy); P. Garfias, *Primavera en Edon Hastings* (beautiful verse with a tinge of melancholy hinted at in the words, "Escrito en Inglaterra durante los meses de Abril y Mayo, de 1939, a raíz de la pérdida de España"); Juan Ginés de Sepúlveda, *Tratado sobre las justas causas de la guerra contra los Indios* (2d. ed., with prologue by M. Menéndez y Pelayo, and study by M. García-Pelayo, an important document in attractive new dress); David Hume, *Diálogos sobre religión natural* (Spanish translation by Edmundo O'Gorman, with prologue by Eduardo Nicol); Edmundo Husserl, *Meditaciones cartesianas* (with prologue and translation by José Gaos); Ramón Iglesias, *Cronistas e Historiadores de la Conquista de México (Ciclo de Hernán Cortés)*; Benjamín Jarnés, *Cartas al Ebro* (philosophical letters on sundry things); León-Felipe, *El Payaso de las Bofetadas y el Pescador de Caña: Poema Trágico Español*; and *El Hacha, Elegía española* (the profits from which will be given to help Spanish refugees in France); and *El Gran Responsable (Grito y Salmo)*—all three works produced out of the heartache of Spain; Otto Mayer-Serra, *Panorama de la Música Mexicana, desde la Independencia Hasta la Actualidad* (first hand investigations to secure materials for an ultimate real history of the music of Mexico); J. Medina Echavarría, *Sociología: Teoría y técnica*, and *Panorama de la Sociología Contemporánea* (two studies by a former professor of the University of Murcia); Agustín Millares Carlo and A. Gómez Iglesias (two professors of the Universidad Central de Madrid), *Gramática Elemental de la Lengua Latina*, 2d. ed. by A. Millares Carlo; A. Millares Carlo, *Antología Latina*, Tomo I, *Prosistas—Primera Parte* (the first edition of which appeared, in part, in Valencia, Spain) and *Nuevos Estudios de Paleografía Española*; Ernest Moore, *Bibliografía de los Novelistas de la Revolución Mexicana*; J. Moreno Villa, *Locos, Enanos, negros y niños palaciegos-Siglo XVI-Gente de Placer que tuvieron los Austrias en la Corte Española desde 1563 a 1700* (a manuscript completed as shrapnel came through the windows of the Archivo); also, *Cornucopia de México* (describing the sensations Mexico has produced in the author during two years of residence—a charming book); also *La Escultura Colonial Mexicana* (with 138 full-page plates); Eduardo Nicol (ex-professor in Barcelona, now professor in the National University of Mexico), *Psicología de las Situaciones Vitales*; J. Roura-Parella, *Educación y Ciencia* (a wide view of education as a sector of the life of a people, a function

of culture); Adolfo Salazar, *Música y Sociedad en el Siglo XX*; plus *Las Grandes Estructuras de la Música (El Templo—La Escena—El Pueblo)*; also *Forma y Expresión en la Música*; and *La Música en la Sociedad Europea, desde los primeros tiempos cristianos*, Vol. I; Rafael Sánchez de Ocaña, *Reflejos en el Agua* (a former diplomat writing in whimsical vein and exquisite style); Adam Smith, *Teoría de los Sentimientos Morales, Introducción de Eduardo Nicol*; Traducción de Edmundo O'Gorman; Joaquín Xirau, *Amor y Mundo*; María Zambrano, *Pensamiento y poesía en la vida española* (keen analysis of Spanish life as it was, as it now is, and as it may become).

Other Spanish works that have reached us direct from Spain are:

Drama. Manuel y Antonio Machado, *La duquesa de Benamejí*, *La prima Fernanda*, and *Juan de Mañara* (three fine, healthy plays, by the two brothers in collaboration, almost wholly in verse); José María Pemán, *El testamento de la Mariposa (cuento maravilloso en tres actos)*.

Erudition. Alberto Insúa, *Evocación de Hernández Catá* (a tribute by the Spanish novelist to the Cuban storyteller, essayist, and diplomat); Baltasar Gracián, *Agudeza y arte de ingenio* (modern edition of a great Spanish classic); Azorín, *El escritor* (beautiful and important book treating a variety of literary subjects); Salvador de Madariaga, *Spain* (analysis of events leading to Spain's condition today and her hopes for the future); Allan Chase, *Falange* (analysis of Spain and Spanish America in world ideology of today); Jiménez de Asúa, *La Constitución política de la Democracia española* (by a member of the committee appointed by the Provisional Government of the Spanish Republic to draw up a new constitution, setting forth the difficult problems involved and how they were handled—a "must" book for all who would really understand the movement); Matilde Carranza, *El Pueblo visto a través de los Episodios Nacionales* [de Benito Pérez Galdós]; José María Pemán, *El Paraíso y la Serpiente-Notas de un viaje por tierras de la Hispanidad* (a notebook of observations by an Academician); Ramón Menéndez Pidal, *Manual de Gramática Histórica Española Sexta edición, corregida y aumentada* (6th ed., a welcome addition to our materials for study and for use in teaching and in seminars); Eduardo Benot, *Arquitectura de la Lengua*, 3 tomos (a carefully revised edition of this standard work on Linguistics); *Poema del Cid*—reprinted from the Unique Manuscript at Madrid, with Translation and Notes by Archer M. Huntington (a reproduction in one volume of the original 3 vol. edition of 1907-08, which was never accessible to the ordinary student because of its price).

Fiction. Ramón Gómez de la Serna, *Los muertos, las muertas, y otras fantasmagorías*; Ramón J. Sender, *Crónica del Alba* (a novel of a boy's world, filled with tenderness, idealism, and humor); José María Pemán, *Señor de su ánimo (novela)*.

Verse. Salvador de Madariaga, *Rosa de cieno y ceniza* contains miscellaneous verse, rhetorical lyrics, romances, poems in English, exercises in French, and some translations from English classics. José María Pemán, *Poesía, Antología* (1917-41) is by a young academician (born in 1898) who has written prose and verse, fiction and drama, and erudition, has won several literary competitions, and is an orator of unusual force and a journalist.

Necrology. The Spanish Royal Academy of the Language early in 1943 suffered a grievous loss in the death of Francisco Rodríguez Marín, the great authority on Cervantes and Don Quijote, as well as

an outstanding authority on Spanish folklore. He was born Jan. 27, 1855, and studied for the profession of law, which he practiced in Osuna and in Sevilla. His avocation was literary research and publication. He became a member of the Real Academia Sevillana de Artes y Letras, and later (1897) a Correspondiente in Sevilla of the Real Academia Española. He gave up practicing law and moved to Madrid, and in 1905 was elected a Member of the Real Academia Española, taking his seat in 1907. Upon the death of Marcelino Menéndez y Pelayo, Rodríguez Marín was appointed to succeed him as National Librarian. In the Royal Academy, he was elected Inspector of Publications in 1912 and Bibliotecario Perpétuo in 1923. In 1940 he was appointed Director and served until his death. Many outstanding honors had come to him from his own and other countries.

JOHN D. FITZ-GERALD.

SPANISH MOROCCO. See MOROCCO; TANGIER under *History*.

SPARS. See COAST GUARD; SELECTIVE SERVICE SYSTEM.

SPECIALIZED TRAINING PROGRAM AND CORPS. See EDUCATION; LIBRARY PROGRESS; and for a list of participating institutions, UNIVERSITIES.

SPECIFICATIONS, Government. See WAR PRODUCTION BOARD.

SPECTROGRAPHS, SPECTROMETERS. See CHEMISTRY.

SPEED LIMITS. See STATE LEGISLATION under *Aviation, Highways, and Motor Vehicles*.

SPELMAN FUND. See PHILANTHROPY under *Foundation Activities*.

SPIES. See FEDERAL BUREAU OF INVESTIGATION; LAW.

SPITSBERGEN. See SVALBARD.

SPORTS. Articles covering the activities of the various sports in 1943 will be found under such titles as BASEBALL; BOXING; FOOTBALL; HOCKEY; ROWING; SKIING; TENNIS; YACHTING.

SQUASH RACKETS. See COURT GAMES.

SSB. See SOCIAL SECURITY BOARD.

STABILIZATION. For activities and programs of the U.S. Government aimed at stabilizing wages and salaries, prices, and other aspects of the civilian economy, see UNITED STATES under *Inflation* and other subtopics; AGRICULTURE under *Wartime Price Control*; LABOR CONDITIONS under *Wages and Collective Bargaining*; LIVING COSTS, and the following agencies: ECONOMIC STABILIZATION, OFFICE OF; PRICE ADMINISTRATION, OFFICE OF; WAR MOBILIZATION, OFFICE OF; also, INTERNAL REVENUE, BUREAU OF. For Monetary Stabilization, see FINANCIAL REVIEW under *International Finance*; POSTWAR PLANNING under *International*.

STABLEFLY. See INSECT PESTS.

STAFF COLLEGE, Army and Navy. See MILITARY PROGRESS.

STAGING AREA. See PSYCHIATRY.

STALINGRAD, Battle of. See GERMANY and UNION OF SOVIET SOCIALIST REPUBLICS under *History*; WORLD WAR under *The Russian Front*.

STANDARDIZED DESIGNS. See WAR PRODUCTION BOARD; also, LIVING COSTS; SHIPBUILDING.

STANDARDS. See NATIONAL BUREAU OF STANDARDS.

STATE, U.S. Department of. The Department of State continued in 1943 its manifold activities directed, in the field of foreign relations, toward the defeat

of this country's enemies and the establishment of a secure and just peace.

The outstandingly successful Moscow Conference of October 19-30, in which Secretary of State Cordell Hull participated as the United States representative, adopted a four-power declaration on postwar security and other declarations on justice and democracy after the war. The Department took the initiative on behalf of this Government in bringing together representatives of the United Nations, and those associated with them in the war, at two Conferences in the United States: the United Nations Conference on Food and Agriculture held at Hot Springs, Va., in May, and the First Session of the Council of the United Nations Relief and Rehabilitation Administration held at Atlantic City, N.J., in November. (See UNITED NATIONS.) Important duties were carried out by the Department in connection with President Roosevelt's meetings abroad with heads of foreign governments, and arrangements were completed through neutral intermediaries for an exchange of enemy nationals in which approximately a thousand American civilians were repatriated from the Far East.

Edward R. Stettinius, Jr., former Lend-Lease Administrator, succeeded Sumner Welles as Under Secretary of State. He took the oath of office on Oct. 4, 1943.

Many of the higher officers of the Department are serving on international and interdepartmental commissions, committees, and boards concerned with the conduct of the war and the study of postwar problems. In the program of psychological warfare, for example, the Department, through its Division of Current Information, the Division of Cultural Relations, and the geographic divisions (Divisions of Far Eastern Affairs, Near Eastern Affairs, and European Affairs, and the Division of the American Republics), works in liaison with other Government agencies in the war-information field and furnishes advice to those agencies based on information assembled by the Department and its officers abroad.

The Department coordinates in the field of foreign relations the many complex war activities of other agencies and, in large part, furnishes the means of carrying out these activities so far as they require action in foreign countries by the U.S. Foreign Service. The offices of the Foreign Service have necessarily become the headquarters or centers of American wartime activity in the countries with which the United States maintains diplomatic relations. Legations of the United States in Canada and in seven of the American republics were raised to the status of Embassies during 1943. An Auxiliary Service has been created on a temporary basis to supplement the permanent staff of the Foreign Service in handling new responsibilities created by the war and in serving other Government agencies.

Functions of the Department relating to those aspects of economic warfare and foreign relief not involving questions of foreign policy were transferred in November, 1943, to the newly established Foreign Economic Administration (q.v.). The organization of the Department as of Jan. 1, 1944, consisted of the following offices, divisions, etc.:

1. The Secretary of State, the Under Secretary of State, four Assistant Secretaries of State, a Legal Adviser, an Executive Officer, four Advisers on Political Relations, an Adviser on International Economic Affairs (position vacant), and an Associate Adviser on International Economic Affairs; an Assistant to the Secretary of State and five Special Assistants to the Secretary of State; three Special Assistants to the Under Secretary of State and a

Liaison Office directly supervised by the Under Secretary; a Committee on Political Planning and a Committee on Special Studies; and a Special Consultant and a General Consultant.

2. Four divisions charged with responsibility for the relations of the United States with particular regions of the world, namely, the Divisions of the American Republics, of European Affairs, of Far Eastern Affairs, and of Near Eastern Affairs. Mention may also be made here of the Office of Philippine Affairs and the Caribbean Office. The last-named office includes the United States Section of the Anglo-American Caribbean Commission.

3. The following offices which are concerned with the personnel and phases of the activities of the Foreign Service: Division of Foreign Service Administration, Foreign Service Buildings Office, Office of Foreign Service Furnishings, Foreign Service Officers' Training School, Board of Foreign Service Personnel, and Division of Foreign Service Personnel.

4. Some twenty-odd technical, advisory, and administrative divisions and offices, as follows: Division of Accounts, Office of the Chief Clerk and Administrative Assistant, Division of Commercial Policy and Agreements, Division of Communications and Records, Office of Coordination and Review, Division of Cultural Relations, Division of Current Information, Division of Departmental Personnel, Division of Economic Studies, Financial Division, Office of Fiscal and Budget Affairs, Division of Foreign Activity Correlation, Office of the Geographer, Division of International Communications, Division of International Conferences, Passport Division, Office of the Petroleum Adviser, Division of Political Studies, Division of Protocol, Division of Research and Publication, Special Division, Translating Bureau, Central Translating Office, Office of the Editor of the Treaties, Treaty Division, Visa Division, and Division of World Trade Intelligence.

The above organization was effective throughout the year 1943. On Jan. 15, 1944, the State Department was reorganized, and thereafter the divisions charged with responsibility for the relations of the United States with particular regions of the world were: Office of American Republic Affairs, Office of European Affairs, Office of Far Eastern Affairs, Office of Eastern and African Affairs, and Office of Special Political Affairs. Other phases of the Department were organized under the Offices of Foreign Service Administration, Departmental Administration, Public Information, Economic Affairs, Wartime Economic Affairs, Transportation and Communication, and Controls.

STATE-FEDERAL CONTROVERSIES. See **EDUCATION**; *Law under Decisions Concerning the Federal System*; also (re soldier vote) **UNITED STATES**.

STATE LEGISLATION. The legislatures of forty-four States met in 1943 in regular session. The four exceptions were Kentucky, Louisiana, Mississippi, and Virginia. This marks the first year in our history, therefore, that so many legislatures have assembled and adjourned with the nation actively engaged in war.

The difficult problems of the war and the equally perplexing ones of the postwar years appeared to be the strongest factors determining the form taken by the bulk of the 1943 legislative product. To a large extent laws affecting normal peacetime concerns of the States—such as labor, welfare, housing, taxation, interstate relations, and transportation—were shaped by war and postwar needs. The same considerations led the legislators to curtail their deliberations as much as possible with the result that the 1943 sessions, on the whole, were the shortest in recent history and the number of bills submitted and studied was the least.

War and Postwar Legislation. Every legislature meeting in 1943 considered and passed laws dealing with various aspects of the war. Many of them acted to clothe their governors with large grants of authority to dispose of emergency war situations. In some cases, the governors are to act in concert with war or defense councils. Alabama, California, Connecticut, Delaware, Iowa, New Hampshire,

Pennsylvania, Vermont, and Washington are among the States which passed laws of this kind. In 15 States, including seven of those mentioned, extraordinary powers covering the authority to alter highway rules and regulations were granted to the governors who are to exercise these powers, in most cases, in cooperation with the State highway boards. The trend toward a stronger wartime State executive was forecast by similar laws passed during 1942 in Maine, Massachusetts, New Jersey, New York, and Rhode Island.

Civilian defense also received considerable attention. Although all of the States had defense agencies operating by the close of 1942, the 1943 legislatures in some cases, notably in Alabama and California, reconstituted them. Civilian defense was involved also in Nevada's creation of a State police force and in Colorado by the authorizing of a State Guard to replace the National Guard called into Federal service. Uniform blackout regulations for protection against enemy action resulted from a tri-State accord between California, Oregon, and Washington, and with Federal authorities. The California legislature pioneered in another direction by becoming the first to provide a system of compensation for civilian defense volunteers.

Most of the housing laws—of which some 140 were submitted in about 40 States—considered in 1943 were concerned with wartime problems. Twenty-eight States passed enabling legislation to permit existing housing authorities to engage in war housing; in six other States such bills were introduced but failed of passage. Nine States authorized local housing authorities to open public housing projects to occupancy by war workers, while county and regional housing authorities were authorized in six States and the area of operation of existing authorities extended by the legislatures in five others. On the State level, a State Housing Authority was set up in Connecticut and the office of State Director of Housing in Georgia.

An entire category of laws benefits persons in the armed forces. These laws cover a wide range of subjects ranging from the granting of special benefits, privileges, and exemptions to the reinstatement of ex-service men returning into civilian life. The most common type is that which safeguards the equity of service men in unemployment compensation funds. With the passage of laws in 1943, all of the States but Louisiana and New Mexico had perfected amendments to their unemployment compensation statutes eliminating penalties which would otherwise be charged against service men for time spent in the armed forces.

The jobs of service men are protected by 1943 laws of three States—Nevada, Rhode Island, and Utah. The Rhode Island law provides penalties for an employer who refuses to restore a job to a member of the armed services if the member applies within forty days of discharge and the employer is able to rehire him.

At least 36 States in 1943 modified their income, property, license, or poll tax provisions to benefit service men. The income tax law was thus altered in 16 States; the property tax law in 16 States; licensing provisions, chiefly relating to professional and business fees or to motor vehicle licenses, were changed in 26 States; and the poll-tax law in 9 States. In addition, Tennessee's legislature repealed its poll tax entirely, but the supreme court in that State held the repeal to be unconstitutional (*Biggs v. Beeler*). These amendatory laws vary widely but the ultimate purposes of such legislation are the same—to ease the tax burden on service men while they are in service and to facili-

tate their reentry into civilian life and occupation after discharge. Similar motives are behind the adoption in many States of simplified procedures under which service men, particularly those overseas, may have legal instruments acknowledged and proved.

Many States sought to benefit their sailors and soldiers through guarantees of their voting rights, not only through poll-tax modification but by alteration of registration provisions and other electoral procedures. Absentee voting was made possible in Delaware when the 1943 legislature endorsed a measure passed by the preceding legislature, thus amending the State's constitution. The widespread movement to lower the voting age from 21 to 18 was, in part, espoused as an obligation owed to those in service. Only in Georgia was the effort successful in meeting legislative approval. In a general election on August 3, the voters endorsed the action of their legislators and ratified the 18-year-old voter measure as an amendment to the State constitution. Georgia thus became the first State to take such action.

Other benefit measures adopted include veterans' rehabilitation funds set up in North Dakota, Oregon, and Wisconsin; educational provisions in California, Montana, Oregon, and South Dakota; bonus laws passed by Vermont and New Hampshire; provisions for free higher education of veterans' children in New Hampshire, North Carolina, and West Virginia; a fund for the purchase by discharged veterans of farms and homes in California; and acts granting veterans and disabled service men the same rights enjoyed by the same groups after World War I, including "preference" in obtaining public employment, passed in many of the States. The Oregon and California educational measures are especially noteworthy. The former proposes to grant Oregon veterans, desirous of attending any public or accredited private school or college in the State, financial aid to the amount of \$75 the first month of school attendance; \$50 a month for eight months; and \$35 a month for nine months of each subsequent school or college year. This measure must be popularly ratified before it becomes effective. Under the California law, discharged service men from that State may receive funds for school fees and living expenses, up to \$40 a month for the latter alone. As much as \$1,000 may be expended on the account of any single veteran.

The need to develop plans and programs for postwar reconstruction and development led the legislatures to consider measures toward that end. Special State agencies to coordinate plans and activities of the State governments and to give assistance and guidance to private and local governmental planning efforts were created or authorized in at least half of the States in their 1942 and 1943 legislative sessions. In several States—including California, Georgia, and Indiana—the new agencies replace pre-existing planning boards. Many of the States have retained the old planning bodies as the coordinating agency for postwar plans and have invested them with new powers and additional funds. From the inclusion of representatives of labor, business, commerce, agriculture, local governments, and others on these boards, it would seem that the effort is being made to bring into focus the various interests of the States.

Fiscal preparation for the postwar years, involving the creation of reserve funds from surpluses or bond issues, was considered by most of the legislatures in 1943. About 24 of them passed laws setting up such funds for public works, veterans' benefits, airport and highway expansion, capital improve-

ments and long-term repairs, and similar purposes. Among the States setting up reserves from surplus funds were Illinois, Michigan, North Carolina, Arkansas, California, Maine, Maryland, Ohio, North Dakota, and Wisconsin. Unused highway appropriations and revenues were frozen for highway construction and related work after the war, while bond issues for postwar public works have been authorized by the legislatures in Delaware, Montana, New York, and North Carolina.

The need for development of postwar plans and measures on all levels of government has led to what might be called a trend toward investing local governments with greater autonomy over their financial destinies. This has been expressed by the passage of legislation granting local jurisdictions the power to build up cash reserves for capital improvements later on. By the close of 1942, nine States had passed enabling laws granting this power to their local governments. Ten more States—Arizona, Connecticut, Florida, Maine, Minnesota, New Hampshire, North Carolina, North Dakota, Pennsylvania, and Rhode Island—took similar action in 1943. The passage of laws in a number of States—including Indiana, Kansas, Minnesota, and New Jersey—giving local governments extensive authority to purchase land and make other arrangements for airports adds strength to this movement, as do the new planning and zoning and urban rehabilitation laws in others. The desire to stimulate the rehabilitation of cities through rebuilding run-down neighborhoods by private capital lay back of the Massachusetts law authorizing the investment of life insurance funds in low-rental housing, and of the extension for six more years by the New York legislature of previous authorization in that State. The California legislature adopted a law permitting cities to acquire property for urban redevelopment purposes and Indiana, Kansas, Maryland, Missouri, and Wisconsin have new laws on this subject.

Taxation and Finance. On the whole, the yield from sources of State revenue reached unprecedented heights following the nation's embroilment in the war. This increase in receipts was not evenly distributed among the various sources. While State personal and corporation income taxes were unusually productive, for example, license fees and excises on motor vehicles and motor vehicle fuels declined appreciably. Although some States, more dependent on the declining sources of income than were the other States, were forced to adopt new levies, many of the States were able to grant their citizens some tax relief although the twofold desire to improve their financial standing for postwar needs and their unwillingness to prejudice the success of national price and economic policies prevented all but relatively minor tax reductions.

The major tax relief offered by 1943 legislatures related to income taxes. South Dakota and West Virginia abolished their income levies outright, while California, Iowa, Maryland, New York, North Dakota, Oklahoma, Oregon, and Wisconsin granted taxpayers substantial reductions. Most of them provided for deductions for medical care or for insurance costs while Alabama, Colorado, Massachusetts, and North Carolina permit certain new deductions.

California, likewise, lowered rates on corporation income and on bank and corporation franchise taxes. West Virginia exempted from the two per cent consumers' sales tax all food purchased up to fifty cents, and Nevada reduced the tax rate on property valuation. Various types of tax relief were granted to dealers in merchandise frozen under wartime controls in Minnesota, New Hampshire,

and North Carolina, while motor-fuel tax exemptions were extended to airplane operators by laws of Arkansas, North Dakota, Oklahoma, and Washington; Texas reduced its motor-fuel tax rates on Diesel fuels; and Alabama, Florida, Georgia, Indiana, North Dakota, and Oklahoma exempted the Federal government from paying certain State motor-fuel taxes.

Among the 1943 increases or new taxes levied are a one per cent "pay-as-you-go" tax on gross income in Delaware to expire at the end of 1944, and a tax of one cent per ten cigarettes in the same State. Alabama, Florida, and New Mexico also levied new tobacco taxes. The Iowa income tax law was amended to apply to war workers temporarily in the State. Some 16 States imposed new or re-enacted old motor fuel and gasoline taxes, while Alabama, Florida, Idaho, Utah, and Washington and a few other States assessed new or increased existing taxes on liquors. Few 1943 changes in severance tax laws assessed against extraction of natural resources took place, but a trend was noticeable toward expansion of special utility taxation to cover transportation and power services hitherto not subject to a special utility tax.

Taxes on "juke boxes" were imposed in Oklahoma and Oregon, the latter also levying a three per cent sales tax which must be popularly ratified. North Dakota reenacted a two per cent retail sales tax and Nebraska increased its head tax for public assistance from two to three dollars a year. Washington became the seventh State to levy a special excise tax on motor vehicles in lieu of general property taxes.

Colorado became the second State—Mississippi is the other—to have a general statute providing for reimbursement for all out-of-State auditing. The Colorado law provides that the costs of audits must be paid by out-of-State taxpayers for any tax due the State. Also related to tax administration were the major integration of tax agencies in Illinois and North Carolina's adoption of the enabling act proposed by the Council of State Governments and giving the Commissioner of Revenue power to enter into agreements with the Federal government or with any State or political subdivision of a State for the purpose of coordinating the administration and collection of taxes. One of the most interesting measures affecting tax and fiscal matters is the New York measure authorizing the creation of "tax revenue stabilization reserves," the purpose of which is to permit the accumulation of unneeded funds in the "fat" years for expenditure during the "lean." This measure met with popular approval in the November, 1943, election.

Labor Legislation. A great volume of labor laws was considered by the legislatures in 1943, much of it following closely along lines which became evident in 1942. New notes were struck as the result first of growing manpower shortages as the nation's output reach unprecedented heights, and second of strikes and disputes in defense and war industries.

During the 1942-43 biennium, 20 States made permanent changes in laws relating to hours, night work, day of rest, and meal periods, in order to increase the production of individual workers. In several States occupations previously covered were excluded from hours laws. In Vermont, for example, the nine-hour day, fifty-hour week for women was amended to allow a ten-hour day and sixty-hour week for a period not to exceed ten consecutive weeks. Meal periods were shortened in two States while in six States, laws were passed lowering ages at which minors may work at night, or

permitting minors to work at later hours than formerly. In other States, changes were made suspending statutes for the duration of the war only, or granting authority to the labor commissioner or governor to vary labor laws during the war period.

Three States—Maryland, Delaware, and South Carolina—adopted in 1943 stringent "work-or-fight" measures providing penalties for unemployed males, not in school, who refuse to accept employment. More common have been laws adopted in over one quarter of the States altering statutory requirements to permit wider use of women workers. Some, including laws in Illinois and Washington, assure women of equal pay for equal work.

Employment of boys, previously restricted, has been made possible, especially in bowling alleys and in dairy and farm work, in many States. Still others have lowered the age limits to permit boys to obtain conditional chauffeur licenses and driving certificates. Authorization of shorter school terms or unusual recesses to release students for farm work has been made in North Carolina, California, and Utah, while New York continued previous authority to release pupils for planting and harvesting, and added authorization for student work in canneries. An interesting sign of the times as it relates to students and the manpower situation is a Nebraska law which permits junior colleges to suspend until 1947 without loss of status. In all, since Dec. 7, 1941, more than three fourths of the States considered alterations of their child labor laws; in 27 of the States, changes have actually been made or authority to modify laws has been granted.

Prisoners are made available for work in Maryland and North Carolina. Recipients of old-age assistance in California and Montana have been encouraged by law to leave assistance rolls to accept seasonal work. In this connection, several legislatures—including those of California, Colorado, Nevada, and Oklahoma—have memorialized Congress to amend Federal regulations to permit old-age assistance recipients to do odd jobs without forfeiting State aid. The adoption of so-called "second-injury fund" laws in at least five States—Maine, Michigan, Oklahoma, Rhode Island, and Washington—in 1943, adding to the 14 which previously had laws on the subject, was designed to encourage employers to hire physically-handicapped workers. Under these laws, employers pay costs of second injuries, but if these injuries, combined with the original handicap, result in permanent disability, the additional cost is borne by the State "second-injury" fund.

Special measures were taken by 1943 legislatures to meet the shortage of professional workers when a score of States passed laws relating to teachers, doctors, dentists, and nurses. Indiana has prohibited the retirement of municipal police officers on pension for the duration. Maine has taken similar action regarding State police. Retired school teachers are encouraged to return to work by Arizona, Arkansas, California, Indiana, and North Carolina laws, while many States have lowered teaching requirements in order to issue emergency teachers' certificates. Laws easing the requirements for practice by physicians, surgeons, and dentists have passed in Delaware, Kansas, Maine, Nevada, New York, Pennsylvania, and Washington, while Kansas and Oklahoma will permit nurses from other States to practice.

Measures requiring legal responsibility of labor unions and their representatives drew much attention in 1943 sessions. During the year, 11 States enacted restrictive industrial relations measures.

Alabama, Arkansas, Colorado, Florida, Kansas, Missouri, and Texas adopted laws tightening control over labor organizations and requiring their licensing and periodic filing of financial and membership reports. The intent of these bills, expressed in the Texas law, is to establish regulation of unions, their officers, organizers, and other representatives, as a public policy. Anti-violence bills were placed on the statute books of Arkansas and Michigan, the Arkansas act curbing picketing and other activities resembling closely the 1941 Texas law and the 1942 Mississippi law. Alabama's law, adopted in mid-1943, incorporates features of laws passed earlier in the other States. Identical laws requiring periodic statements and limiting certain union activities passed in Idaho and South Dakota, while Massachusetts banned the exaction of fees by labor unions for work permits. In addition to these laws, minor changes were made in existing industrial relations acts in Minnesota, Pennsylvania, and Wisconsin.

Over half of the 1943 sessions studied laws to increase workmen's compensation. Minnesota and Michigan broadened their statutes to provide general coverage of occupational diseases, while Arizona and Oregon passed occupational disease laws for the first time. Compensation for injuries has been liberalized in Indiana, Massachusetts, North Carolina, and several other States. A Rhode Island statute establishes a curative center for rehabilitating injured workmen.

Exclusive of changes effected for the benefit of service men, few changes were made in the benefit provisions of State unemployment compensation laws in comparison with 1941 sessions. Changes consisted for the most part of increases in the maximum duration of benefits or in minimum or maximum weekly benefit amounts. Such changes were made in laws adopted in 20 States. A number of States adopted technical amendments to further the program for payment of benefits by one State on behalf of another or for similar reciprocal arrangements with Canada in cases in which a worker has moved from one jurisdiction to another.

Two opposing trends with respect to taxation for unemployment compensation were noted. One group of laws—namely those in Idaho, Maine, Maryland, Pennsylvania, and Tennessee—adopted experience-rating systems which will, in effect, lower tax rates. In several others, penalty rates above 2.7 per cent were lowered or abolished. Another group of laws, in Alabama, Florida, Illinois, Iowa, Maryland, Minnesota, Missouri, Ohio, Oklahoma, and Wisconsin, assess larger "war risk" payments against employers whose payrolls have expanded greatly within the last two or three years. The purpose behind these is to build up reserves in anticipation of heavy demands after the war.

Social Legislation. Child welfare, public health, public assistance, and related subjects have not been ignored by 1943 legislatures. As funds for the support of these services have mounted, or as the cost of living has gone up, the movement to increase assistance to the indigent and dependent has gained strength.

Ceilings on old-age-assistance grants were raised by five States—California, Maine, Maryland, Minnesota, and Tennessee. Maximum limits were eliminated altogether by Iowa, Montana, and New Jersey, and Nevada raised its minimum from \$30 to \$40 a month. All of this action raised from 27 to 31 the number of States which have maximums of \$40 a month or more on old-age assistance grants or have no ceilings at all. Other States, including Michigan and Colorado, increased the amount of

property which recipients of assistance might have.

The aid to dependent children program in Wisconsin was expanded. The program of aid to children between 16 and 18 years was extended to all of the counties in the State. Iowa adopted a new program which met with the approval of the Federal Social Security Board. The same body approved of the aid to the blind program adopted by the Illinois legislature. By the close of the 1943 legislative year, all States but Nevada had aid to dependent children programs approved by the board and all but Delaware, Missouri, Nevada, and Pennsylvania had board-approved aid to the blind programs. Approval by the board is a prerequisite to appropriation of Federal funds to assist in carrying on such programs.

Steps have been taken by about two thirds of the States to set up wartime child-care programs. A score of these States this year enacted legislation authorizing public schools or other agencies to establish day care nursery schools or to undertake extended school services, with some of the States providing funds for operation of day care centers. New York, one of the first States to act, authorized a \$15,000,000 program and made an outright appropriation of \$2,500,000 for matching by the Federal government.

The desire to curb juvenile delinquency led to legislation setting up "liquor curfews." Florida, Texas, North Carolina, and Arkansas were among the States thus limiting the sale of liquor after certain hours, while Washington, Michigan, and Arkansas took steps to prohibit sale of alcoholic beverages to minors. Other bills of a like nature were passed in Idaho, Oklahoma, and Arizona, the law in Arizona calling for public school instruction on the nature and effects of alcohol, and the Oklahoma statute stipulating the nonsale of beer in dancing places.

More than half of the legislatures considered laws affecting social hygiene. Seven of them—Arkansas, Florida, Georgia, Oklahoma, Tennessee, Texas, and West Virginia—adopted measures to combat prostitution, raising to 19 those with adequate control over most features of prostitution. The pre-marriage health examination laws adopted this year by Missouri, Nebraska, Idaho, and Wyoming raise to 30 the States having this provision. The same number of States provide for blood tests of expectant mothers, as a result of laws in Idaho, Georgia, Kansas, and Nebraska. An Alabama law of 1943 launched a venereal disease control program which has as its goal the eventual examination for syphilis of every person in the State between the ages of 14 and 50. The waiting periods between application for and receipt of licenses that were put on the statute books to prevent "gin marriages" and "child marriages" are losing popularity, however. Illinois abolished its waiting period two years ago, California this year; and Maryland has eliminated its requirement when persons in the armed forces are concerned.

The outstanding piece of prison reform legislation was passed by a special session of the Georgia General Assembly. The old State Board of Prisons was abolished and a State Department of Corrections substituted. At the same time, the Director of Corrections was specifically enjoined to eliminate "chain gang" conditions, prohibit whipping, abolish road camps, segregate the sexes, and the juvenile offenders from hardened inmates, severely restrict the use of striped clothing on prisoners, institute programs for rehabilitation, provide educational and recreational activities, and formulate rules and regulations in a systematic manner for

the rewarding of exemplary prisoners. These measures supplement the constitutional amendment ratified by the people of Georgia in August which takes away from the governor the power of reprieve, pardon, or commutation of sentence except in case of death or treason sentences.

State Government and Employees. A number of administrative shifts and changes drew the attention of the legislatures in 1943. One of the most important of these was the creation in Michigan of a new Department of Business Administration to effect economies and to suggest means of consolidating functions and activities. Another was the creation in New York of a new department, the Department of Commerce, a measure which was subsequently ratified by the people in the November election. This is the first full-fledged State department created in New York in twenty years. Other developments include the tax administrative reorganization measures in Illinois and South Dakota and the abolition in Maine of the old age assistance commission and the transfer of its duties to the department of health and welfare.

Reapportionment, much overdue in many cases, was acted on in Pennsylvania and New York. In the latter, the 1943 action is the first since 1917. The legislature of the Empire State also changed the beginning of the fiscal year from July 1st (used by almost two thirds of the States) to April 1st (also used by Washington and Wyoming).

Measures to grant retirement plan benefits to State employees and to raise their salaries were considered by several legislatures. In part these were adopted to offset the effect of more lucrative Federal and industrial employment, to "stabilize State employment, reduce excessive personnel turnover, and offer suitable attraction to high-grade men and women to enter State service" as expressed in a Wisconsin statute, and to compensate for increased costs of living. With the adoption of retirement plans for State employees in Illinois, Michigan, and Wisconsin this year, about half of the States had taken such action. The Wisconsin proposal was vetoed by the governor but was repassed over his veto at his request. Supreme court and circuit court jurists in Oregon are affected by a retirement plan adopted for them, while teachers benefit from pension systems adopted in Arizona, Oklahoma, and Nevada. The people of Georgia in August ratified a constitutional amendment permitting the State government to set up a retirement system for teachers.

Some States permit employees of local governments to participate in their retirement systems. With the enactment of laws by Pennsylvania, Colorado, and Wisconsin this year, 11 States now provide for State-wide retirement plans for municipal and local government employees. A Connecticut law of this year established a separate system for certain municipal servants.

A score of legislatures found it desirable to raise salary levels, at least ten States taking such action for their own employees. In North Dakota, the ceiling over State employees' salaries was removed and an increase of 25 per cent given; California continues previous wartime salary increases of \$25 and \$20 a month to employees whose pay is less and more, respectively, than \$300 a month. New Jersey, New York, and Wisconsin all gave their employees wartime cost-of-living bonuses on a percentage basis. In each case, the increase is not applicable over a certain set amount. School teachers also benefit from increases in about ten States. In this connection, Utah became the 25th State to pass a minimum salary law for teachers.

Among other measures affecting the framework and operation of government were laws in Idaho and Nebraska granting women the right to serve on juries. They, and Vermont which took similar action by popular ratification of a constitutional amendment in November, 1942, raise to 28 the States permitting women to serve in this capacity. Moves in the direction of constitutional revision were heralded in Georgia and New Jersey. In the former, a joint resolution called for the appointment of a constitutional revision commission; in the latter, the people of New Jersey ratified a measure authorizing the next legislature to adopt a revised constitution for the State.

Aviation, Highways, and Motor Vehicles. The post-war importance of aviation was recognized by several of the State legislatures. Many of them made their postwar planning agencies responsible for coordinating aeronautical development plans with their other business. This object apparently lay back of the Wisconsin action in abolishing its pre-existing State aeronautics board and entrusting the stimulation of aviation to the State planning board. In Alabama, the 1943 legislature reorganized the aviation commission which is to foster aeronautics, while the Minnesota legislature adopted several outstanding measures. One of these created an independent department of aeronautics and gave it extensive powers; others laid the basis for a State system of municipal airports and created a commission to develop airports for Minneapolis and St. Paul.

The 1943 legislatures, especially those of the western States, have shown much interest in the construction of flight strips along highways. These laws, more or less uniform, authorize State highway departments to cooperate with the U.S. Public Roads Administration.

The impact of war was reflected clearly in developments affecting highways and motor vehicles. Many legislatures authorized the adoption of new vehicle licenses because of essential metal shortages. The matter of highway speeds likewise drew attention. Many of the laws granting extraordinary powers to governors and highway departments empowered them to set limits as conditions require.

Several States—including Delaware, Minnesota, Missouri, Nebraska, New Hampshire, New Mexico, North Carolina, and Wisconsin—legislated to liberalize their regulations governing the maximum lengths, gross weights, gross load limits, and other aspects of trucks and trailer-combinations, with a view to adopting minimum approved standards. Efforts along this line in Illinois were not successful. Greater concern was not shown for this problem, however, because the States had agreed in 1942 to apply uniform motor vehicle regulations for the duration.

In the field of reciprocity laws, several agreements relating to trucks, commercial vehicles, and passenger automobiles were reached. In Florida, a State reciprocal trade commission was established to treat with similar commissions in neighboring States in the endeavor to wipe out gross inequities. In the Southwest, an administrative accord affects Oklahoma on the one hand, and Arkansas and Texas on the other. Legislative action led to the adoption of a reciprocal truck bill in New Hampshire and to the negotiation of a pact ending a trucking war between Wisconsin and Michigan. Reciprocity measures were adopted also in Minnesota, South Dakota, Tennessee, and Utah, and an Illinois legislative commission has been created to study the subject.

Indiana, Oregon, and Utah enacted new driver

responsibility laws requiring financial ability to pay for accidents. In the field of motor vehicle inspection, several States have been forced by loss of personnel and other reasons to make readjustments. Laws in Connecticut, Delaware, South Carolina, Vermont, and Washington are designed to abandon or curtail the periodic inspections.

The trend toward banning the use of so-called "highway" funds—gasoline taxes, motor vehicle registration receipts, etc.—for nonhighway purposes continued in 1943. Constitutional amendments to invoke this ban were submitted to the voters by the legislatures of Maine and Washington, and similar amendments were initially approved in New York and Pennsylvania, but must be passed on again by the legislature before appearing on the ballot. Fourteen other States at the present time have these constitutional provisions.

Interstate Legislation and Uniform Laws. Several examples of interstate accord have been mentioned in other connections. Important developments in the field of river and marine agreements deserve special mention, however. The Arizona legislature provided for the consummation of a contract between that State and the Federal government, looking toward adherence to the Colorado River Compact. The other six States in the Colorado basin have signed the compact which was promulgated in 1925.

The Republican River Compact, signed Dec. 31, 1942, came before the legislatures of Colorado, Kansas, and Nebraska for review; all three gave legislative approval. Georgia ratified the Atlantic States Marine Fisheries Compact and became a member of the compact commission, while South Dakota took legislative action in anticipation of the creation of an eight-State committee of Missouri River Valley States for development of that region.

Through legislative or executive action, the member-States of the interstate oil compact commission extended their membership for four more years. Connecticut became the 37th State to sign the interstate parole and probation compact and enabling legislation was passed by the New York legislature to permit the participation of that State.

Uniform laws were also considered in 1943. A total of more than 60 adoptions of the 65 recommended uniform laws brought to about 800 the uniform laws on the statute books of the States. South Dakota, for example, adopted seven uniform acts and North Dakota, eight. The Simultaneous Death Act, alone, was adopted by 13 legislatures in 1943.

Conclusion. It is apparent that legislative leaders endeavored to streamline 1943 sessions by limiting their consideration largely to "emergency" laws dealing with war and postwar matters, and to necessary regular business. As a result, the sessions were—on the whole—shorter, and the number of bills considered was less, than in 1941 and 1939.

In recent "legislative" years—the odd-numbered years—the State law makers have considered about 60,000 bills and have enacted about 18,000 of them. In 1939, 59,500 bills were introduced and 17,953 enacted; in 1941, with three States not reporting, 58,579 were introduced and 18,124 passed. In 1943, introductions (with three States not reporting) totaled 42,400 and enactments numbered 15,867. Thus about 37.5 per cent were enacted this year in contrast to less than 31 per cent in 1941 and 30 per cent in 1939.

The desire to streamline sessions is seen in the number of calendar days taken up by the legislatures. For example, the session in Kansas was two

weeks shorter than in 1941; Maine's was three weeks shorter; and Michigan's was twenty-four weeks shorter. More than 12 legislatures dispensed with their business in at least one calendar week less time than in 1941 while seven cut down their sessions a few days. Only three sessions besides Missouri's—which was the longest in the State's history—were longer than in 1941.

See FIRE PROTECTION; PRISONS; ROADS AND STREETS. For a discussion of Federal versus State authority see LAW under *Decisions Concerning the Federal System*; also (re soldier vote) UNITED STATES.

HERBERT WILTSEE.

STEATITE. See TALC, STEATITE.

STEEL. See IRON AND STEEL and the topics there listed.

STEPHAN CASE. See LAW under *War Decisions*.

STERILIZATION. See NETHERLANDS under *History*.

STOCK MARKET. See FINANCIAL REVIEW.

STOCKPILES. See WAR PRODUCTION BOARD under *Conservation of Materials*; articles on mineral products.

STORAGE. See REFRIGERATION and AIR CONDITIONING; also INSECT PESTS.

STORMOVIK. See AERONAUTICS under *Russian Types*.

STORMS. See HURRICANES.

STRAITS SETTLEMENTS. See BRITISH MALAYA.

STRATEGIC AND CRITICAL MATERIALS. Strategic materials are defined as "those essential to national defense, for the supply of which in war dependence must be placed in whole, or in substantial part, on sources outside the continental limits of the United States, and for which strict conservation and distribution control measures will be necessary."

The Conservation Division of the WPB issues quarterly revisions of some 500 materials grouped into three categories. Group I includes those materials whose supply is insufficient to satisfy war plus essential industrial demands. Those in Group II are currently sufficient to satisfy these same needs. Group III materials are in excess of current essential needs. The two factors determining the placement of the materials are supply—including domestic production, import, stockpiles, Government Planning, United Nations policy arrangements; and demand—including military, civilian, and export needs, stockpile reserves, Government regulations, substitution possibilities.

The Oct. 1, 1943, list of the Conservation Division revealed the easing of many nonferrous metals including aluminum and magnesium, into Group II, and the even more marked easing of ferroalloys indicated that these materials in unfabricated form are sufficient to supply essential war and industrial needs, although there was no indication of availability for general use. Certain synthetic rubbers were eased, while a few chemicals, including sulfuric acid, were more critical. New materials added to Group I were dichlorodifluoromethane (freon 12), lignumvitae, and penicillin.

The most significant change in the Jan. 15, 1944, list was the easing of copper and steel to Group II. However, in opposition to the general trend toward easement, most chemicals and plastics became slightly tighter. Also, in contrast to the general easing of nonferrous materials, tin continued as a critical supply. Another such exception was the advance of lead from Group III to Group II, due to a gradually declining supply.

In making a comparison of 1942 and 1943, the

most striking changes have occurred among metals: on Nov. 6, 1942, the three most critical materials were aluminum, copper, and magnesium, while a year later, Oct. 15, 1943, these same metals had become plentiful enough to be eased into Group II, with copper changing on Jan. 15, 1944. On the first date, the most critical of the ferroalloys was molybdenum, only to be eased into Group III on January 15. Cadmium, nickel, platinum, and malleable cast iron remained in Group I.

For governmental activities in conserving or procuring strategic and critical materials, see WAR PRODUCTION BOARD under *Balanced Production*; also, COORDINATOR OF INTER-AMERICAN AFFAIRS, FEDERAL BUREAU OF INVESTIGATION, MINES, BUREAU OF, and NATIONAL HOUSING AGENCY. See the separate articles on important materials, as BERYLLIUM, HIDES AND LEATHER, NICKEL, PLATINUM, TIN, etc. See also the articles on various branches of industry and those listed under SUBSTITUTES.

STRATEGIC AREAS. See GEOLOGICAL SURVEY; PHOTOGRAPHY.

STRATEGIC BOMBING FORCE. See AERONAUTICS; WORLD WAR under *The Air War*.

STRATEGIC SERVICES. See JOINT CHIEFS OF STAFF; PHOTOGRAPHY.

STRATOSPHERE WIND TUNNEL. See ELECTRICAL INDUSTRIES.

STREAM POLLUTION. See SANITATION.

STREETS, STREET CARS. See RAPID TRANSIT; ROADS AND STREETS.

STRIKES. See LABOR CONDITIONS under *Strikes*.

STUDENT LOANS. See EDUCATION, U.S. OFFICE OF; Table of UNIVERSITIES under *Student Aid*.

SUB-CHASERS. See NAVAL PROGRESS under *Submarine Warfare*.

SUBMARINES, SUBMARINE WARFARE. See GREAT BRITAIN, JAPAN, and each of the American Republics, under *History*; COAST GUARD; NAVAL PROGRESS under *Submarine Warfare*; SHIPPING; WORLD WAR under *The War at Sea*.

SUBSIDIES. Governmental subsidies were in effect with regard to certain commodities in the United States during 1943, with the object of holding down the cost of living and, in other instances, stimulating war production. The use of subsidies was advocated by the Administration and was the subject of extended Congressional debate, a ban having been voted and subsequently vetoed during the year. The highly controversial nature of the subject appears in the discussion of the subject from diverse angles in the following articles: AGRICULTURE under *Wartime Price Control*; BUSINESS REVIEW; FOOD INDUSTRY; LIVING COSTS; UNITED STATES under *Inflation*; WAR FOOD ADMINISTRATION. See also ZINC.

SUBSTITUTE MATERIALS. See WAR PRODUCTION BOARD; also, CHEMICAL INDUSTRY; CHEMISTRY; FOOD AND DRUG ADMINISTRATION; HEATING AND VENTILATING; MINES, BUREAU OF; NATIONAL BUREAU OF STANDARDS; PLASTICS; RUBBER; and other articles on products.

SUBVERSIVE ACTIVITIES. See FEDERAL BUREAU OF INVESTIGATION; FEDERAL COMMUNICATIONS COMMISSION; PAN AMERICANISM; ARGENTINA, BELGIUM and the other German-occupied countries, BULGARIA, CHILE, CUBA, EIRE, GERMANY, HUNGARY, INDIA, ITALY, MEXICO, RUMANIA, SOUTH AFRICA, SPAIN, and SWITZERLAND, under *History*. Also, UNITED STATES under *Investigations*.

SUBWAYS. See RAPID TRANSIT; also, FOUNDATIONS.

SUDAN. See ANGLO-EGYPTIAN SUDAN; FRENCH WEST AFRICA.

SUEZ CANAL. A sea-level canal across the Isthmus of Suez, connecting the Mediterranean and the Red Sea. Operated by the French-controlled Suez Canal Company, which holds a concession (expires Nov. 17, 1968) from the Egyptian Government, the canal is normally the main route between maritime Europe and the ports of the Indian and western Pacific oceans.

Cargo traffic on the canal declined from the peak of 36,129,101 net registered tons carried by 6,570 ships in the calendar year 1937 to 13,092,615 tons carried by 2,459 ships in 1940. A total of 98,944 passengers (civil and military) traveled through the canal during 1940. During 1941 and 1942 Axis bombers repeatedly attacked Canal installations and were reported to have sunk several ships which blocked traffic temporarily. See EGYPT under *Transportation*.

SUGAR. The sugar beet crop in the United States in 1943 was estimated by the U.S. Department of Agriculture at 6,516,000 tons of beets from 552,000 acres, expected to produce about 938,000 tons of sugar, compared with the 11,674,000 tons of beets, 954,000 acres and 1,613,000 tons of sugar in 1942, and a 1932-41 average of 9,834,000 tons of beets from 833,000 acres and 1,452,000 tons of sugar. The acre yield was 11.8 tons versus 12.2 tons in 1942 and 11.8, the 10-year average. The production figure represent approximately a 44 per cent reduction from the near-record crop produced in 1942 and the smallest tonnage produced since 1922. Contributing to the decrease this season were such factors as unfavorable weather at planting time, uncertainty as to the labor situation, discouragement brought about by the difficulties experienced in harvesting the previous crop, and hard competition from other crops demanding less hand labor. Beet sugar production in leading States was estimated for Colorado 244,000 short tons, California 168,000, Montana 102,000, Idaho 78,000, Nebraska 76,000, and Utah 64,000.

Production of sugarcane for sugar in 1943 was marked by a favorable season in both Louisiana and Florida. The 1943 sugarcane crop of the two States, including cane for seed, was grown on 289,000 and 33,000 acres, respectively, and was estimated as 5,914,000 and 990,000 tons. Molasses as a sugarcane by-product totaled 42,423,000 gal. The sugarcane sirup produced in eight Southern States totaled 19,240,000 gal. and sorgo sirup made in 18 States amounted to 11,760,000 gal.

Maple products report by 10 States included 2,555,000 gal. of sirup and 578,000 lb. of maple sugar. These figures compared with 2,915,000 gal. of sirup and 654,000 lb. of sugar in 1942 and the average of 2,534,000 gal. of sirup and 800,000 lb. of sugar for the 10-year period.

The average prices received by growers during the 1942 marketing season and the value of production, according to preliminary estimates, were respectively for sugar beets \$7.19 per ton, \$46,853,000; sugar cane for sugar and seed \$4.41 per ton, \$30,428,000; sugar cane sirup \$1.013 per gal., \$19,492,000; maple sugar 45.3 per lb., \$262,000; maple sirup \$2.85 per gal., \$7,274,000; and sorgo sirup \$1.247 per gal., \$14,668,000. Beginning in May, 1942, sugar was rationed and the consumption limited to ½ lb. per person per week but to conserve the nation's fruit crop an additional allowance of one pound for every four quarts of canned fruit

and of one lb. per family member for packing preserves, jams, jellies, and fruit butters was made. See **CHEMISTRY**; **CUBA** under *History*.

SULFA DRUGS (Sulfonamides). See **MEDICINE** under *Advances in Sulfonamide Therapy*; also, **CHEMICAL INDUSTRY**; **CHEMISTRY** under *Drugs*; **DENTISTRY**.

SULFUR. See **CHEMICAL INDUSTRY**; **CHEMISTRY** under *Sulfur*.

SUMATRA. See **NETHERLANDS EAST INDIES** under *Area and Population*.

SUPPLIES, Bureau of. See **FOREIGN ECONOMIC ADMINISTRATION**.

SUPREME COURT. See **LAW**. For decisions, see also the subject, as **ELECTRIC LIGHT AND POWER**; **COMMUNICATIONS** under *Radio*; **LABOR CONDITIONS** under *Federal Labor Legislation*.

SURETYSHIP. See **INSURANCE**.

SURGERY. See **MEDICINE** and **SURGERY**; also, for brain operations, **PSYCHIATRY**.

SURINAM (Netherlands Guiana). A colony on the northern coast of South America, belonging to the Netherlands. Area, 54,291 square miles. Population (Jan. 1, 1942), 183,730, including the Negroes and Indians living in the forests. Chief towns: Paramaribo (capital), 56,223 inhabitants, Nieuw Nickerie, 5,000, Albina, Coronie, and Moengo. Vital statistics (1941): 5,140 births, 1,928 deaths, and 451 marriages. Education (1941): 120 schools and 22,664 students.

Production and Trade. The principal agricultural products are sugar, rice, maize, coffee, cacao, balata, bananas, oranges, molasses, rum, and timber. Mineral output (1941) included bauxite (1,093,764 metric tons), gold, and salt. Livestock (1941): 21,396 cattle, 5,727 goats, and 7,161 pigs. Trade (1941): imports 9,429,922 guilders; exports 11,398,377 guilders. Shipping (1941): 548 vessels of 2,197,098 register tons cleared.

Communications. The rivers provide the principal means of communication to the interior. Railways: 244 miles. Air services (1943): Paramaribo and Miami, Florida, operated by Pan American Airways; Paramaribo and Trinidad, Curaçao, and other West Indian points, operated by Royal Dutch Air Lines.

Government. Budget estimates (1943): revenue 8,765,000 guilders, expenditure 8,769,000 guilders. The executive authority and administration are under a governor, assisted by an advisory council. There is a representative body called the States of Surinam consisting of 15 members (5 appointed by the Governor and 10 elected by the voters). Governor, Dr. J. C. Kielstra (app. Aug. 16, 1933).

History. The threat to Surinam's wartime prosperity and military security that arose as a result of Axis espionage, sabotage, and submarine warfare during 1940-42 was largely banished in 1943. After more than 10 years in office, Governor Kielstra resigned early in December and was appointed Netherlands Minister to Mexico, effective Jan. 3, 1944. J. C. Brons, vice chairman of the Surinam Council and former president of the Paramaribo Court of Justice, became acting Governor.

When Professor Kielstra took office in 1933, Surinam's revenues averaged 4,000,000 guilders (\$2,160,000) annually and a subsidy of nearly 3,000,000 guilders from the Netherlands Government was required to balance the budget. When he left, the budget had increased to 13,500,000

guilders (\$7,390,000) and was balanced without the aid of the mother country.

Crown Princess Juliana made an official visit to Surinam, arriving at Paramaribo from the United States by air on November 2 and making a tour of the principal towns and mining centers. She was enthusiastically greeted by the polyglot population. All classes participated in a great demonstration in Paramaribo in honor of the royal family. The Netherlands Government in London arranged late in the year to purchase all first-quality coffee produced in the colony at fixed prices to bolster the coffee industry. See **NETHERLANDS** under *History*.

SURVIVAL RATES, Pupil. See **SCHOOLS**.

SURVIVORS INSURANCE. See **SOCIAL SECURITY BOARD**.

SVALBARD. An arctic archipelago (10° to 35° E. and 74° to 81° N.) owned by Norway. The principal islands are West Spitsbergen (or Mainland), North East Land, Prince Charles Foreland, Edge Island, Barents Land, King Karl's Land, Hope Island, and Bear Island (69 sq. mi.). Total area, 24,294 square miles. Population on Jan. 1, 1940, about 1,000. Green Harbor (capital), New Aalesund, Coles Bay, Longyearbyen, and Braganza Bay were the main settlements, all on the western coast of West Spitsbergen. Coal was the chief product (627,000 metric tons in 1938 and 400,000 in 1940). Iron, asbestos, and gypsum exist. Most of the inhabitants were evacuated during September, 1941. The archipelago commands the route over which Allied war supplies were being sent to the Russian port of Murmansk. On Sept. 8, 1943, heavy units of the German fleet made a hit-and-run raid on West Spitsbergen, guarded by 100 Norwegian soldiers. The Germans claimed to have wrecked harbor installations and the weather station at Barentsburg. Five British destroyers were reported to have reached Barentsburg on Sept. 13, 1943, and landed additional forces.

SWAZILAND. A British protectorate in South Africa. Area, 6,705 square miles. Estimated population, Jan. 1, 1940, 160,000. At the 1936 census there were 153,270 native Bantus, 2,740 whites, and 705 of mixed race. Capital, Mbabane. The chief occupations are stock raising and agriculture (mainly corn, tobacco, groundnuts, cotton, and millet). Some tin and gold are mined. Revenue in 1939-40, £109,756; expenditure, £159,812; public debt, £99,195. The government is in the hands of a resident commissioner representing the British High Commissioner for Basutoland, Bechuanaland Protectorate, and Swaziland.

SWEDEN. A constitutional monarchy of Scandinavia. Capital, Stockholm. Sovereign, Gustaf V, who succeeded to the throne Dec. 8, 1907.

Area and Population. Area, 173,398 square miles; population, estimated at 6,406,474 on Jan. 1, 1942 (6,250,506 at 1935 census). Of the 1941 population, 3,990,000 lived in rural and 2,381,000 in urban districts. Births in 1941 numbered 99,386 (15.6 per 1,000); deaths, 71,774 (11.2 per 1,000); marriages, 56,954 (8.9 per 1,000). The number of Norwegian refugees in Sweden in 1943 was estimated at 19,000. Estimated populations of the chief cities on Jan. 1, 1942, were: Stockholm, 599,962; Göteborg, 283,183; Malmö, 157,462; Norrköping, 71,150; Helsingborg, 62,553.

Education and Religion. Schooling is compulsory and there is practically no illiteracy. The elemen-

tary schools had 557,667 pupils in 1939. In 1941 there were 52,939 pupils in 139 public secondary schools; 6,046 in 58 people's high schools; 4,144 in 2 high and 9 elementary technical schools. The state universities at Uppsala and Lund and the medical faculty in Stockholm had a total of 5,878 students in 1941, the private universities at Stockholm and Göteborg, 2,531 students. According to the 1930 census, there were 6,653 Jews, 4,763 Roman Catholics, 3,981 Methodists, 805 Baptists, and 1,499 members of other minority creeds. The rest of the inhabitants adhered to the state-recognized Lutheran Protestant Church.

Production. The 1940 census showed 35.7 per cent of the total population dependent upon industry (32.8 per cent in 1930), as against 31.9 per cent dependent upon agriculture (36.7 per cent in 1930). The bread grain crop of 1942 (wheat and rye) increased to 896,200 metric tons from 610,300 metric tons in 1941. Feed-grain crops (barley and oats) totaled 1,690,924 metric tons in 1942 (1,354,396 in 1941). Beet sugar production from the 1942 crop was about 276,000 short tons. Yields of other crops in 1941 were (metric tons): Potatoes, 2,069,693; peas, 31,520; beans, 1,489; vetches, 11,123; feed roots, 2,403,018; hay, 2,394,449. The livestock census of June 1, 1942, showed 2,531,412 cattle (2,759,394 on Jan. 3, 1941); horses, 586,295 (613,423); sheep, 445,729 (410,923); goats, 26,809 (25,490); swine, 836,311 (997,025); poultry, 7,046,514 (10,850,792). Exports of sawn and planed lumber were 355,000 standards (of 1,980 board feet) in 1942 (475,000 in 1941).

Exports of iron ore were 13,650,000 tons in 1939, 10,137,000 in 1940, 9,539,000 in 1941, and 8,633,000 in 1942. Of the total iron-ore shipments, Germany took 11,292,000 tons in 1939, 9,285,000 in 1940, 9,477,000 in 1941, and 8,200,000 in 1942. Estimated mineral and metallurgical production in 1940 was (in metric tons): Coal, 450,000; iron ore, 14,000,000; pig iron, 745,127; ferro-alloys, 42,084; steel ingots, 1,145,064; manganese ore, 6,000; tungsten, 200; copper, 10,000; zinc, 32,000; aluminum, 1,400. Peat output was 400,000 tons in 1941. Shale oil production was about 37,000 tons in 1943; an expansion program adopted in 1943 called for facilities to produce 81,000 tons annually. Merchant ships delivered in 1941 totaled 161,000 gross registered tons.

Foreign Trade. Merchandise imports in 1942 totaled 1,770,000,000 Swedish crowns (1,671,600,000 in 1941); exports, 1,312,800,000 crowns (1,351,200,000 in 1941). Nearly three-fourths of Sweden's trade was with Germany. German-Swedish trade totaled about 1,750,000,000 crowns in 1942 and 1,912,000,000 crowns in 1941. During 1942 Swedish ships made 61 trips between Göteborg and North and South America, carrying 528,000 gross tons of cargo. The value of goods imported from overseas was 550,000,000 crowns; of goods exported, 60,000,000 crowns. Grain, fodder, mineral oils, etc., were the chief imports from overseas. Germany in 1942 supplied about 3,800,000 metric tons of coal and coke, 280,000 tons of iron and steel, 72,000 tons of pig iron, about 110,000,000 crowns worth textile raw materials, and 100,000,000 crowns worth of machinery.

Finance. Sweden balanced its budget annually until the outbreak of World War II, and thereafter faced growing deficits due to extraordinary defense expenditures. For the fiscal year ended June 30, 1942, actual receipts were 2,267,633,000 crowns and expenditures 3,603,823,000 crowns. Estimates for 1942-43 placed current receipts at

2,362,550,000 and expenditures at 2,360,980,000 crowns (including ordinary defense appropriations of 762,000,000 crowns). Estimates for the capital budget balanced at 364,500,000 crowns. The public debt rose from 2,634,000,000 crowns on June 30, 1939, to 8,732,000,000 on July 1, 1943. Average dollar exchange rate of the Swedish crown (krona): \$0.2383 in 1941 and 1942.

Transportation. Sweden in 1942 had about 10,381 miles of railways, 55,000 miles of highways, and air lines connecting Stockholm with Helsinki, London (irregularly), and the chief cities of German-dominated Europe. Under legislation passed in 1939, all private railway lines were amalgamated with the state-owned lines by 1943. Over 90 per cent of the railway traffic is electrified. Swedish air lines in 1941 carried 20,987 passengers and 552,290 lb. of freight. Incoming shipping traffic from foreign countries totaled 11,592,000 tons in 1941; outgoing traffic, 12,079,000 tons. The total 1941 foreign traffic was 52.6 per cent that of 1939. The Swedish merchant marine on Dec. 31, 1941, consisted of 2,123 ships of 1,464,398 gross tons. Gross earnings in 1941 were 595,110,000 crowns. From September, 1939, to Apr. 1, 1943, Sweden lost 179 ships of 483,196 gross tons and 1,133 seamen as a result of attacks by belligerent powers. Of 600,000 tons of deadweight Swedish shipping chartered to Britain in 1940, more than two-thirds was lost in the service of the United Nations.

Government. The Constitution of 1809, as subsequently amended, vested executive power in a hereditary King, acting under the advice of a Council of State (Cabinet), which is responsible to the Diet or Riksdag. The Upper Chamber of the Riksdag has 150 members, one-eighth of whom are elected annually by provincial and city councils; the Lower Chamber, 230 members, elected by direct male and female suffrage for four years. The composition of the Lower Chamber elected Sept. 15, 1940, was: Social Democrats, 134; Conservatives, 42; Agrarians, 28; People's party, 23; Communists, 3. A coalition Government including representatives of the Social Democratic, Agrarian, Conservative, and People's parties was appointed Dec. 13, 1939, with Per Albin Hansson (Social Democrat) as Premier. For developments in 1943, see below.

HISTORY

Neutrality Maintained. Opening the 1943 session of the Riksdag on January 12, King Gustaf, then in his 85th year, again emphasized the primary aim of Swedish policy—to stay out of the war at all costs. To maintain her neutrality, Sweden was prepared to fight to the bitter end against invasion from any source. Premier Hansson told the Riksdag on January 18 that the commander in chief of Swedish armed forces had sent out a special order to all local military and civilian authorities to prepare to fight to the last on their own resources if communications between the central and local authorities were disrupted.

To present an effective defense against any attack, Sweden continued to strengthen, equip, and train the formidable military force that had been in process of expansion since before the outbreak of war. The budget for 1943-44 allocated 1,260,000,000 Swedish crowns for defense. Additional contingents of troops were called up for training in January and in June partial mobilization for a 30-day period was ordered by radio. Two million copies of a booklet instructing the public what to do in case of war were distributed by the Ministry of Information in July. In mid-September

the Swedish general staff announced that the emergency mobilization of the armed forces would be maintained because of the imminent possibility of new extensions of the war in northern Europe.

Pressure from Allies. The policy of military preparedness was spurred by repeated protests from both Berlin and Allied capitals against alleged violations of Swedish neutrality favorable to the opposing side, and by a series of armed attacks upon Swedish ships, planes, and towns.

On the night of April 28-29 bombs bearing Russian markings were dropped on Verkoe Island, near the Swedish naval base of Karlskrona. In reply to a Swedish protest, Moscow replied that no Russian planes had been over Sweden that night. On June 5 the Soviet publication *War and the Working Class* published an article by Prof. Sergei Kryloff charging the Swedish Government with seven specific violations of neutrality in favor of the Axis (see *New York Times*, June 6, 1943, for the detailed charges). On June 9 a Swedish Foreign Office spokesman denied most of the Russian charges, but admitted several instances in which the Germans had been aided. Sweden, he said, had permitted the passage of one armed German division from Norway to Finland in 1941. He also admitted that after Soviet submarines had sunk Swedish vessels engaged in German trade in the Baltic, Swedish warships had escorted convoys containing some German ships through Swedish territorial waters.

Stockholm authorities on March 10 rejected a protest from Britain against the building in Sweden of fishing boats for German order, which the British said were to be used as minesweepers. The British Ministry of Economic Warfare on April 20 announced that Sweden was exporting to Germany, in addition to iron ore and other raw materials, certain classes of goods outside the strict category of war materials that "may be used either for civil or military purposes." Sweden declined to answer the Anglo-American-Soviet notes of early August warning neutral nations against granting asylum to "Axis war criminals." After bombs of British origin were dropped on Lund during the night of November 18, the British Government admitted that one of the planes that did not return from a raid on Germany that night might have been responsible. It agreed to make full compensation.

There were other infringements of Swedish neutrality for which responsibility was not fixed. A Government communiqué of June 12 blamed sabotage by unidentified persons for the sinking of three Swedish destroyers at Haarsfjaerden, near Stockholm, on Sept. 17, 1941. On September 2 it was announced that a "violent explosion" in the Karlshamn oil factories had killed one worker, injured 20, and caused fire and damage estimated at a million crowns. In December the Swedish police arrested 14 Swedish seamen and one Norwegian for espionage on behalf of one unnamed foreign power against another—the latter was believed to be either Germany or Finland.

Friction with Germany. Swedish relations with Germany, however, constituted the major focus of the controversy over neutrality and the principal danger of Sweden's involvement in the war. The steady stiffening of the Government's attitude toward Berlin was explained indirectly by Foreign Minister Christian E. Guenther on May 7, when he said that Sweden had acted in accordance with the dictates of the moment in interpreting her neutrality obligations so as to keep out of war. He

implied that during the first years of the war, when Sweden's defenses were weak and the danger of a German attack was great, the Government had slipped somewhat from the path of strict neutrality in order to avert an open clash with Hitler. By the beginning of 1943, however, German military difficulties had greatly reduced the likelihood of an invasion of Sweden and Stockholm felt free to take a stronger line toward Berlin, despite German threats.

This firmer attitude was reflected in Sweden's refusal to grant Germany a \$25,000,000 credit in connection with the renewal of the Swedish-German trade agreement early in 1943. The Germans responded by suspending in January the safe-conduct agreement under which a limited number of Swedish ships had been permitted to pass through the German and Allied blockades. They asserted that the Swedes had permitted Norwegian ships in Allied service to load at Göteborg goods needed for the Allied war effort. It was late in May before Berlin agreed to permit the resumption of this vital overseas traffic.

Meanwhile a new source of controversy had developed. The Swedish submarine *Draken*, while maneuvering in Swedish territorial waters off Göteborg on April 16, was fired on by a German ship engaged in laying mines in Swedish waters. At the same time another Swedish submarine, the *Ulen*, which was on maneuvers with the *Draken*, disappeared in circumstances indicating that it might have been sunk by German gunfire. Two vigorous Swedish protests were rejected by Berlin, but on May 3 the German naval attaché in Stockholm offered an expression of regret from the German navy at the loss of the *Ulen*.

The anger aroused in Sweden by these events was deepened by successive flights of German warplanes over Swedish territory, and by the growing German brutalities toward Norwegian and Danish patriots. It found expression in strong criticism of the Swedish Government's foreign policy, particularly the continuance of the transit agreement of 1940 under which unarmed German troops and supplies were moved by rail across Sweden to and from Norway. This had eased the German burden of occupying Norway, facilitated the construction and manning of new German defenses in Norway, and lessened the strain on German shipping. The deep irritation of the Swedes was vented against the Swedish Nazi minority when two local groups attempted to hold rallies late in April. Both meetings were broken up by rioting crowds.

Under pressure from within as well as from Britain and Russia, the Swedish Government on August 5 announced that the transit of war material to Norway and Finland would cease on August 15 and the traffic of German soldiers "on furlough" between Norway and Germany would be halted August 20. On August 15 the transit ban was extended to include German courier planes. On October 1 the Swedes also banned all rail shipments of oil through Sweden destined to other countries, thus ending German shipments of oil and gasoline to the Norwegian port of Narvik.

The Germans accepted these restrictions in poor grace. The Nazi press opened another campaign of recrimination against the Swedes and there were further German infringements of Swedish neutrality, mainly in the form of attacks on shipping. On August 25 German naval forces sank two Swedish fishing boats in the North Sea, causing the death of 12 sailors. The German Foreign Office rejected a strong Swedish protest, declaring that the fishing boats were operating in prohibited waters. The

Berlin radio denounced Swedish fishermen as spies for the Allies and criticized the "arrogant and provocative" attitude of the Swedish press.

On October 22 a German fighter shot down a Swedish passenger plane en route from England to Stockholm, killing 13 of the occupants including one American clergyman, the Rev. Dr. T. C. Hume, who was going to Sweden on a mission for the World Council of Churches. In reply to Swedish protests, the Germans announced that they would renew the safe-conduct agreement for Swedish commercial planes only if the Swedes agreed to submit cargo and passenger lists for German approval.

The Swedes meanwhile had aroused further ire in Germany by offering asylum to some 7,000 Jews arrested by the Gestapo in Denmark on September 30; approving a million-crown loan for the post-war rehabilitation of Denmark, Norway, and Finland; and offering a welcome to Norwegians and Danes escaping to Sweden. The Swedish Government revealed in December that it had begun training some 15,000 Norwegian refugees of military age in "police duties" including rifle practice. It was learned that the Norwegian Government-in-Exile was financing the program and that it was under the direct supervision of Andreas Aulir, head of the Norwegian State Police, whose headquarters were in London.

The arrest by German occupational authorities in Norway late in November of 1,200 Oslo University students and professors for deportation to the Reich caused a new wave of anti-German feeling in Sweden. The Swedish Government on December 1 appealed to Berlin to halt the deportations and release the imprisoned students "in the interests of future Swedish-German relations." This appeal was angrily rejected by the German Foreign Minister, who bluntly told the Swedes to "mind their own business." In reply the Swedish Government on December 18 warned that a "further deterioration" of German-Swedish relations was in prospect unless the Germans ended their repression of "neighboring peoples."

Economic Conditions. Despite a short grain crop in 1943, food rations remained fairly liberal. The continued trade with Germany and with overseas countries enabled the Swedes to obtain the most essential imports and the country entered 1944 in relatively good shape. The expected unemployment crisis failed to develop. Military mobilization, expansion of arms industries, and increased domestic production of substitutes for normal imports absorbed all of the kingdom's able-bodied men.

See *CHEMISTRY* under *Foreign*; *DENMARK*, *FINLAND* and *NORWAY* under *History*; *LABOR CONDITIONS* under *Collective Bargaining*; *MUSIC*; *NAVAL PROGRESS*; *REFUGEES*; *SOCIALISM*.

SWIMMING. A year without a new crop of swimming records would be almost unbelievable and the past campaign proved no exception for no fewer than six world's records for men were broken. Alan Ford, Yale freshman, turned in the most noteworthy performance when he reduced the great Johnny Weissmuller's 0:51 for 100 yards free style to 0:50.6. Ford had tied the old mark (set in 1927) during the 1942 season. The young Eli also helped Yale's Richard Baribault, Brewster McFadden, and Richard Lyon lower the 400-yard free-style relay record to 3:26.2.

Harry Holiday, University of Michigan ace, knocked down two back-stroke standards, swimming 100 yards in 0:57 and 200 meters in 2:22.9.

Emmett Cashin of Stanford cut the breast-stroke marks for 200 yards to 2:19 and 200 meters to 2:33.7. However, both of Cashin's records are awaiting official recognition. Michigan's trio of Holiday, Hayes, and Patten cut the American short-course time for the 300-yard medley relay to 2:50.8, fastest time ever achieved in any country though the International Federation lists no record for this event. Henry Kozlowski of Northwestern was clocked in 0:22.1 for 50 yards free style, a new national standard.

Ohio State dominated the indoor season, capturing the National Collegiate A.A. crown and the National A.A.U. title. However, before the summer rolled around the Buckeyes had lost most of their stars to Uncle Sam and could offer no real threat in the National A.A.U. outdoor meet, Yale easily taking the team crown in that competition. Yale again won the Eastern Intercollegiate League title, Ohio State led the Western Conference, and Rutgers paced the Eastern Collegiate Association.

With many of our leading girl swimmers joining the services (and the Waves seem to be their favorite branch) the mermaids who usually steal the sports space from the less photogenic men stayed more or less in the background. However, enough comely and talented young stars were unveiled to raise high hopes for close and colorful competition among the lassies during 1944. The girls accounted for two American records. Miss Ann Curtis, 17-year-old San Francisco high school naiad, lowered the short-course time for 500 meters free style to 7:01.8 and Miss Jane Dillard of Fort Worth, Texas, the long-course standard for 100 meters breast stroke to 1:24.3.

Miss Curtis and Miss Florence Schmitt, 12-year-old New York Women's Swimming Association member, were the brightest stars among the mermaids. Miss Curtis, in her first start in national competition, won both the 400 and 800 meter free-style titles and Miss Schmitt captured the 1,500 meter and long-distance championships. The Multnomah A.C. girls of Portland, Ore., won A.A.U. team honors indoors and the Riviera Club of Indianapolis triumphed outdoors.

Among the divers, Frank Dempsey of Ohio State and Miss Ann Ross of Brooklyn's St. George Dragon Club were best off the springboard and Miller Anderson of the Army Air Force and Miss Jeanne Kessler of Chicago took platform diving laurels.

THOMAS V. HANEY.

SWITZERLAND. A federated republic of central Europe. Capital, Bern (Berne).

Area and Population. Area, 15,944 square miles; population at the census of Dec. 1, 1941, 4,265,703, against 4,066,400 at the 1930 census. Of the 1941 population, 1,396,747 resided in cities of more than 10,000 inhabitants. The 1941 census populations of the chief cities were: Zurich, 336,395; Basel, 162,105; Berne, 130,331; Geneva, 124,431; Lausanne, 92,541; St. Gallen, 62,530; Winterthur, 58,883; Lucerne, 54,716. The live birth rate per 1,000 inhabitants was 18.5 in 1942 (16.9 in 1941); death rate, 11.0 (11.1). In 1941 there were 2,194,085 Swiss and 126,621 foreign visitors to holiday resorts (1,922,825 Swiss and 1,007,865 foreigners in 1939). The 1930 census showed 2,924,313 German-speaking Swiss; 831,097 French-speaking; 242,034 Italian-speaking; and 44,158 Romansch-speaking.

Defense. All males from 18 to 60 years of age serve in the compulsory national militia. Some 650,000 men were mobilized following the outbreak of war in Europe in 1939. After the collapse

of France, which lessened danger of invasion, between 200,000 and 250,000 men were kept under arms. The army is well-equipped with modern arms, for which 1.5 billion Swiss francs were appropriated during 1933-43. Strong fortifications were constructed along the frontiers. Defense expenditures in 1942 were 1,253,377,000 francs.

Education and Religion. Literacy is virtually universal under a system of public education which varies by cantons. Statistics for 1940-41 showed 452,506 pupils in primary schools, 73,634 pupils in secondary and lower middle schools, and 10,121 students in the seven universities (in 1941-42). According to the census of 1930, there were 2,230,303 Protestants, 1,666,350 Roman Catholics, and 17,973 Jews.

Production. In 1939 about 1,285,419 workers were employed in industrial establishments and 887,511 were engaged in agricultural pursuits. As a result of the war, the area under cultivation was expanded by 65 per cent, increasing home production of cereals to 32 per cent, potatoes to 46 per cent, and vegetables to 70 per cent of normal needs. The 1942 potato crop was about 1,250,000 metric tons (1,080,000 in 1941); vegetables, over 500,000 metric tons or more than double the 1941 yield. Milk production declined from 28.4 million quintals in 1939 to 26.2 millions in 1941. Fruit production was 7,512,000 quintals in 1941; wine, 18,180,000 gal. The 1942 livestock census showed 195,549 sheep, 144,375 horses, 3,644 mules and donkeys, 207,359 goats, 1,492,862 cattle, and 670,115 swine. Estimated mineral production in 1940 (metric tons): Aluminum, 28,000; magnesium, 700; iron ore, 180,000; coal, 3,000. The chief manufactures are watches and clocks, machinery, textiles, electric equipment, chemicals, shoes, cheese, condensed milk, etc.

Foreign Trade. Including bullion except "gold bullion for banking transactions," the value of merchandise imports in 1942 was 2,049,600,000 Swiss francs (2,024,400,000 in 1941); exports, 1,572,000,000 francs (1,462,800,000 in 1941). This increase was due mainly to higher prices, as the volume of imports was only three-fifths that of 1938. After the fall of France, Swiss foreign trade was carried on principally with Germany and German-controlled areas of Europe.

Finance. Estimates for 1943 (ordinary budget) were: Receipts, 884,700,000 Swiss francs (871,000,000 in 1942); expenditures, 481,200,000 francs (479,000,000 in 1942). The total of estimated ordinary and extraordinary budget expenditures in 1942 was 1,819,000,000 francs, of which defense appropriations were 1,310,000,000 francs. The total estimated tax receipts were 703,000,000, leaving 1,116,000,000 francs to be raised by loans. From Sept. 1, 1939, to Dec. 31, 1942, the cost of national defense totaled 4.6 billion francs, of which 3.4 billions were met by loans. Exclusive of the railway debt, the public debt of the Confederation on Jan. 1, 1942, was 4,285,761,752 francs. Including the railway debt and the debts of the cantons and municipalities, the total internal debt on Jan. 1, 1943, was nearly 10 billion francs, or more than 2,000 francs per capita. The average exchange rate of the Swiss franc was \$0.2268 in 1940, \$0.2320 in 1941, about \$0.2340 in October, 1942, and about \$0.2335 in October, 1943.

Transportation. The railways, mostly state owned, have 3,218 miles of line. In 1942 the Federal Railways carried 158,600,000 passengers (an all-time record) and 22,300,000 metric tons of freight. Highway mileage in 1940, 10,291. Swiss and foreign airlines operating within the country in 1941

carried 4,668 passengers (62,239 in 1939); flights covered 242,266 kilometers (2,580,600 in 1939). A merchant marine of 10 or more vessels was acquired in 1942 in an effort to continue Swiss overseas trade.

Government. The Constitution of 1874 provides a republican confederation of 22 cantons or States. The Federal Assembly consists of two chambers; one, the Council of States, is composed of 44 members—two from each canton; the other chamber, the National Council, has 187 members, all elected quadrennially by the obligatory vote of males and females who have attained 20 years of age. The Federal Council consists of seven members, all elected quadrennially by vote of the united chambers of the Federal Assembly; by similar vote, but annually, are chosen, from among the seven, a President of the Confederation and a Vice-President of the Federal Council. Each of the Federal Council's seven members is assigned to the direction of one of the seven Federal administrative departments. President in 1943, Enrico Celio. For developments in 1943, see below.

HISTORY

In the parliamentary elections of October 31, the Social Democratic party gained 11 seats and emerged as the strongest faction in the Federal Assembly, with 56 of the 187 mandates. The Social Democrats then demanded representation in the Federal Council, long dominated by the Radical Liberals and Conservative parties, and a proportionate share of the positions in the Federal Ministries, departments, and civil service. In an electoral session of the Federal Assembly on December 15 one Social Democrat, Ernest Nobs, was named head of the Department of Finance and Custom. The Radical Democratic, Catholic Conservative, and Farmers parties pooled their votes to reelect Marcel Pilet-Golaz for another four-year term as Federal Councillor (Foreign Minister). The Social Democrats had fought the parliamentary election on a platform calling for increased social legislation and a more liberal expression of foreign policy. On November 4 they demanded Swiss recognition of Soviet Russia and the resumption of diplomatic relations with Moscow, suspended for many years.

Throughout the year the Swiss continued the policy of armed neutrality, which kept the country at peace during four and one-half years of Europe's greatest war. On frequent occasions the Swiss Government and the military command called the attention of the population to the continued danger of invasion and likewise reminded the warring powers that Switzerland was ready to fight. A series of preparedness demonstrations took place in the spring. Late in May Gen. Henri Guisan, Swiss commander in chief, warned the world in a radio broadcast to "keep hands off our passes." This warning was taken to reflect Swiss fears of a German-Italian move to seize the St. Gotthard and Simplon Passes through the Alps in order to facilitate the movement of troops and supplies between the two Axis countries.

The Swiss Foreign Office made repeated protests at the violation of the republic's airspace by R.A.F. and U.S. warplanes attacking German and Italian cities. On August 6 it politely rejected the Anglo-American-Soviet note warning neutral countries not to grant asylum to "Axis war criminals." The capitulation of the Badoglio Government to the Allies early in September brought a new flood of refugees from Italy and southeastern France. During September 17-27 alone, a total of 21,860

Italian refugees and 960 escaped Allied war prisoners crossed into Switzerland. Some German and Italian troops likewise entered the republic seeking internment.

The Federal Supreme Court at Lausanne on February 1 imposed light prison terms on five persons charged with publishing communistic propaganda in violation of the emergency decree of Aug. 6, 1940 (see 1941 YEAR BOOK). On January 26 the Federal Council banned one volume of the latest edition of *Meyer's Konversations Lexikon*, printed in Germany, which described Switzerland as "peopled by a medley of criminals, particularly Jews." Two Swiss Nazi political parties were banned by the Federal Council and their newspapers suppressed on July 7 for deliberately pursuing policies violating Swiss neutrality legislation. A military tribunal at Berne sentenced three Swiss to death and 14 others to prison terms on March 31 for espionage on behalf of a foreign power, believed to be Germany. In May a military court at Lucerne sentenced 45 persons to short jail terms for spreading false reports of alleged treasonable activities by a high Swiss army officer.

Because of its economic dependence upon German-controlled Europe, the Swiss Government was unable to pursue in its economic relations with the Reich the same independent policy that characterized its political and military relations. To obtain the raw materials and food needed to keep the nation's economy functioning, the Government was obliged to extend large credits to the Germans and to accept German orders of value to the Nazi war machine. The German wartime debt to Switzerland was estimated at 800,000,000 Swiss francs late in May.

On October 30 the big Swiss armament firm of Sulzer Brothers was blacklisted by the British and American Governments for excessive cooperation with the Reich, including the refusal to submit to inspection of its business relations with the Germans. In a communiqué issued November 5, the Swiss Government denied that the firm had ever exported arms to Germany, exonerated its director, and warned all Swiss manufacturers that sanctions would be applied to any firm submitting to foreign control of its operations.

See **CHEMISTRY** under *Foreign*; **REFUGEES**; **SOCIALISM**.

SYNTHETICS. See topics listed under **SUBSTITUTE MATERIALS**.

SYRIA AND LEBANON. Two republics on the east coast of the Mediterranean between Turkey and Palestine, mandated to France by the League of Nations on July 24, 1922, and proclaimed independent in 1941. Beyrouth (Beirut) is the seat of the French High Commissioner.

Area and Population. The territory is divided into the Republic of Syria (capital, Damascus; area, about 72,560 square miles; estimated population, 2,487,000 in December, 1938) and the Republic of Lebanon (capital, Beyrouth; area, 3,470 square miles; population, 862,600 at 1935 census). Included in the Syrian Republic are the two semi-autonomous districts of Latakia (capital, Latakia; area, 2,310 square miles; estimated population, 372,000 in 1938) and Djebel Druze or Jebel Druze (capital, El Suweideh; area, about 2,700 square miles; estimated population in 1938, 71,000 excluding some 15,000 nomads who spend part of their time in the district).

The people are mainly Arabs and Arabic is the chief language, but there are considerable num-

bers of Turks, Kurds, Turkomans, Circassians, Armenians, Iranians, and Jews as well as about 28,000 Europeans. The chief cities, with 1935 populations, are: Damascus, 193,912; Aleppo, 177,313; Beyrouth, 134,655; Homs, 52,792.

Education and Religion. The entire mandated territory in 1938 had 809 public elementary schools (87,220 pupils), 1,313 private elementary schools (119,894 pupils), 514 foreign primary schools (67,525 pupils), 155 vocational schools (17,984 pupils), 33 secondary schools (1,584 pupils). There was also a French university at Beyrouth (641 students), an American university and a college at Beyrouth (444 students), an Arab university at Damascus (356 students), an Arab academy, and agricultural colleges at Sélémié and Bekaa. The composition of the population by religions was: Moslems, 1,514,755 (including 1,075,816 Sunni Moslems); Christians, 505,419 (including 186,676 Maronites, 151,326 Orthodox, 66,762 Greek Catholics or Uniates, 32,859 Armenians, 28,885 Melkites, 8,887 Protestants, 7,305 Armenian Catholics); Jews, 16,526.

Production. Agriculture and stock raising are the main occupations. Livestock in 1939 included 2,631,000 sheep, 491,918 cattle, 90,030 goats, 80,168 camels, 182,234 asses. Production of the chief crops in 1942 was officially estimated as follows (in metric tons): Wheat, 468,000; barley, 203,000; corn, 33,000; millet and sorghum, 72,000; rice, 3,000. Wheat production for 1943 was unofficially estimated at 650,000 metric tons; barley, 250,000 in 1943; tobacco, 4,698 in 1941; olive oil, 13,000 in 1940-41; cotton, 5,000 in 1941; cottonseed, 15,100 in 1940. The 1943 wool clip was estimated at 2,500 metric tons (2,730 in 1942). Chickpeas, lentils, wine grapes, raw silk, rice, fruits, and vegetables are other crops. Minerals are unimportant. Chief manufactures: Textiles, cement, macaroni, biscuits, soap, matches, beverages.

Foreign Trade. Full trade statistics have not been published since 1938 when imports (including bullion and specie) totaled 70,811,061 Syrian-Lebanese pounds (\$40,787,000) and exports 29,278,213 pounds (\$16,864,000). There is an important transit traffic through Syria and Lebanon in peacetime.

Provisional figures for general trade were (in millions of Syrian-Lebanese pounds): Imports, 38 in 1941 (57 in 1940); exports, 11 in 1941 (19 in 1940). The volume of imports declined from 640,000 metric tons in 1938 to 176,000 in 1941; of exports, from 460,000 metric tons in 1938 (excluding petroleum in transit from Iraq) to 30,000 in 1941.

Finance. Under the French mandatory administration, Syria and Lebanon had separate budgets and also a "common interests" budget covering customs, posts, telegraphs, etc. Actual receipts of the "common interests" budget were 12,237,189 Syrian-Lebanese pounds in 1938 and 7,742,500 in 1939. Estimated receipts of the Syrian Republic for 1940 were 11,746,000 pounds; of the Lebanese Republic, about 6,500,000 pounds. The Syrian-Lebanese pound (equal to 20 French francs), exchanged at \$0.576 in 1938 and \$0.502 in 1939. The official exchange rate in 1942 was \$0.4556.

Transportation. Syria in 1943 had over 900 miles of railway line, providing connections with Palestine, Turkey, and Iraq, and about 6,569 miles of roads. Beyrouth is the chief port of call but Tripoli is used for the important transit trade and is the terminal of one branch of the oil pipeline from the Iraq oil fields. During 1942 the British completed a 175-mile strategic railway linking Beyrouth di-

rectly with Haifa in Palestine and making possible direct railway traffic between Cairo and Istanbul. A 550-mile surfaced highway between Damascus and Baghdad in Iraq was also completed in 1942.

Government. For the political status of Syria and Lebanon preceding the British-Free French invasion in 1941 and the terms of the armistice of July 14, 1941, see 1942 YEAR BOOK. With the ousting of the Vichy regime, the British forces remained in military occupation while Gen. Georges Catroux, named Free French High Commissioner, assumed the civil functions formerly performed by the Vichy Government's High Commissioner at Beyrouth. On Aug. 7, 1941, the British Government in a letter to Gen. Charles de Gaulle guaranteed the Free French "a predominant position in Syria and Lebanon over any other European power," including Britain. In agreement with the British and in accordance with previous pledges, General Catroux proclaimed the independence of Syria on Sept. 16, 1941, and of Lebanon on November 26. The Free French undertook to guarantee both new republics by treaty. However it was indicated that the final status of the two territories would not be determined until the end of the war.

President of the Syrian Republic at the beginning of 1943, Sheik Tajeddine Hassani; Premier, Husni Bey Barazzi (Nationalist). President of the Lebanese Republic, Alfred Naccache, who assumed office Apr. 6, 1941; Prime Minister, Riad Solh. For developments in 1943, see below.

HISTORY

Constitutions Restored. After the battles of El Alamein and Stalingrad late in 1942 had eliminated the German invasion threat from the Middle East, political events in Syria and the Lebanon during 1943 moved rapidly to a climax which brought actual independence to both republics at the close of the year.

The nationalist movements in both Syria and Lebanon refused to accept the French thesis that determination of the final status of the two republics must await the end of the war, and be preceded by the conclusion of treaties with France. The demand for immediate steps toward self government was reflected in the resignation of the Syrian Cabinet early in January. On January 9 Jamai Ulshi succeeded the Nationalist Bloc leader, Husni Barazzi, as the Syrian Prime Minister.

This was followed by the death on January 17 of Sheik Tajeddine Hassani, whom the Fighting French High Commissioner, Gen. Georges Catroux, had named President of the Syrian Republic in 1941 over nationalist opposition. The nationalists made it plain that they expected a voice in the selection of a new President. They had the support of the British Minister to Syria and Lebanon, Maj. Gen. Sir Edward L. Spears, who reflected the British Government's view that the security of British and Allied military bases throughout the Middle East depended upon the friendly support of the Arab peoples.

The French National Committee in London yielded to the nationalist demands. On January 24 it was announced that General Catroux had been empowered to make the necessary arrangements for the restoration of constitutional regimes in Syria and Lebanon, suspended following the outbreak of war in 1939. In March the High Commissioner restored the constitutions and called parliamentary elections, which were held in Syria in July and in Lebanon in September.

Meanwhile General Catroux was absorbed in

the negotiations which led to the amalgamation of Gen. Charles de Gaulle's French National Committee and Gen. Henri Honoré Giraud's North African administration at Algiers on June 4. Shortly after its formation, the French Committee of National Liberation, of which Catroux was a member, appointed Jean Helleu as its Delegate General, or High Commissioner, in Syria and Lebanon. (Gabriel Puaux, who served as High Commissioner during Catroux's absence, was transferred to the post of Resident General of French Morocco.)

Nationalist Governments Formed. The elections in Syria gave the Nationalist Bloc a clear majority in the Chamber of Deputies at Damascus. Nationalist Deputies proceeded to elect one of their leaders, Shukri Quwatly, as President of Syria on August 17, and a Nationalist Cabinet was formed under Premier Saadallah el Jabry. The Arab governments of Egypt and Iraq immediately recognized the independence of Syria. Colonel Oliva-Roget, known for his sympathetic attitude toward the Nationalist Bloc, was appointed French Delegate to Damascus—a move which disposed the Syrian leaders to display restraint and moderation during the subsequent crisis in Lebanon.

The elections held early in September in Lebanon likewise resulted in a victory for the nationalist elements, composed of both Christian and Moslem Arabs. While by no means free of vote-buying and other fraudulence, the Lebanese elections were reported to be far more honest than the French-controlled elections of the prewar years. They took place during an intense wave of anti-French nationalism, attributed in part to governmental scandals and in part to the obvious reluctance of French local officials to give up the powers promised to both Syria and Lebanon in General Catroux's 1941 proclamation. Candidates believed to have French backing were defeated all along the line.

The new Lebanese Chamber of Deputies, composed of 30 Christians and 25 Moslems, elected as President of the republic on September 21 Bechara El-Khoury, a Maronite Christian of definitely nationalist tendencies. The President then appointed as Premier the Moslem nationalist, Riad Solh, one of the pro-independence leaders recently ousted from office by the French authorities.

The new governments of Syria and Lebanon were now faced with three major problems. They had to conclude a permanent arrangement for future relations with France. They had to work out an arrangement for future relations between Syria and Lebanon. And they had to determine their attitude toward the movement for Arab federation, in regard to which the leaders of the other Arab states were then conducting negotiations. An official delegation from Syria was in Cairo for discussions on the Arab federation issue when the Lebanese Government brought the question of French relations to the foreground.

Lebanon Votes Freedom. On November 8 the Lebanese Parliament unanimously adopted a declaration of policy prepared by Premier Solh, which called for the deletion from the constitution of provisions incompatible with full sovereignty and independence. Among the specific demands listed in the declaration were the adoption of a Lebanese national flag, the adoption of Arabic as the sole government language, and the reduction of the status of the French Delegate General to that of a diplomatic mission. The Lebanese also demanded full control over the administration of certain governmental departments and of the so-called "common interest funds" derived from

customs receipts, harbor dues, etc. They asked for the control of Lebanese military forces, but did not request immediate concessions that would interfere with Allied security and prosecution of the war, such as the control of Beyrouth harbor.

Premier Solh's move was made while Delegate General Helleu was in Algiers, discussing with the French Committee for National Liberation the concessions that it would make to Syrian and Lebanese demands for fulfillment of the French pledge of independence. Immediately after the Chamber of Deputies' vote, French authorities in Lebanon imposed a strict censorship on outgoing messages, suspended publication of local newspapers, and took military measures to maintain order under a modified form of martial law.

These measures provoked an outburst of resentment not only in Lebanon but also in Syria and the rest of the Arab world. Premier Solh demanded the immediate restoration of civil rights. The reply of Delegate General Helleu, who had hurried back to Beyrouth from Algiers, was to order the arrest of the Lebanese President, Premier, and other members of the Cabinet and the Chamber of Deputies on November 11. The constitution was suspended, the Government and Chamber of Deputies dissolved, and a pro-French politician, former President Emile Edde, was appointed chief of the Lebanese state.

These drastic measures were taken in accordance with the instructions of the French Committee of National Liberation, according to M. Helleu, and without consulting either the British Minister or Lieut. Gen. W. G. Holmes, commander of the British Ninth Army stationed in Syria and Lebanon. The French authorities took the position that the Lebanese nationalists knew Helleu was returning to Beyrouth from Algiers with proposals for eventual independence approved by the French Committee and that they had chosen to present him with a fait accompli rather than attempt to negotiate a settlement satisfactory to both parties. Consequently they said they would not be "bullied" into acceptance of the nationalists' unilateral program.

French Capitulate. The French authorities were forced to withdraw from this position by the violence of the reaction to their measures of November 11. Rioting and anti-French demonstrations spread throughout Lebanon and into Syria. A general strike paralyzed Beyrouth and other Lebanese cities. Guerrilla bands began to form in the mountains and a country-wide revolt seemed imminent. There were demonstrations of sympathy throughout the Arab world. The Governments of Egypt and Saudi Arabia protested indignantly to the French Committee at Algiers.

The British Government, with the support of the United States, protested the French actions and insisted that immediate steps be taken to restore self government in Lebanon and to fulfill the French pledges to both Syria and Lebanon. The British made it plain that they would intervene with military force, if necessary, to prevent the Lebanese disorders from developing into anti-Allied outbreaks in other parts of the Middle East.

While protesting that the Lebanese events had been exaggerated, the French Committee rushed General Catroux to Beyrouth to bring order out of the developing chaos. Arriving there on November 17, he entered into negotiations with the French, Arab, and British spokesmen. Delegate General Helleu, whose dismissal had been requested as one point in a British plan for solution of the controversy, was recalled to Algiers on

November 20. He was replaced by Yves Chataigneau. The next day the French Committee approved Catroux's recommendations for the immediate release of the Lebanese President and Ministers, the reinstatement of President Bechara El-Khoury, and the opening of negotiations for freeing both Syria and Lebanon within the framework of the League of Nations mandate held by the French.

The release of the Lebanese leaders on November 22 and the withdrawal of French troops from the streets of Beyrouth was hailed with enthusiasm by Lebanese crowds. But neither the Lebanese nor the British accepted the French demand that the President must select a new Cabinet to replace that of Premier Solh. On November 24 the French Committee agreed to the reinstatement of all the members of the dissolved Government and Chamber of Deputies, thus repealing all of the decrees of November 11. General Catroux broadcast an appeal to the Lebanese people to have confidence in France "to respect your rights and liberties." He was loudly cheered as he passed through Beyrouth crowds to pay an official visit to President Bechara El-Khoury and Premier Solh on November 24. Return visits paid by the Lebanese national leaders signified the end of the crisis. The British and U.S. Governments both registered their approval of the settlement.

Independence Achieved. Immediately afterwards General Catroux opened negotiations with the Syrian and Lebanese Governments for the permanent regulation of their relations with France. Both Governments insisted on proceeding on the basis of complete sovereignty. At the end of November the Syrian Chamber of Deputies voted to amend the constitution to eliminate the High Commissioner's power to veto legislation. The Lebanese Government insisted that the amendments to the Lebanese Constitution approved by the Chamber of Deputies were now in force. At a secret meeting on December 1 the Chamber voted a resolution designating the Lebanese flag as the sole recognized banner of the republic. It also authorized legal proceedings against Emile Edde and other Lebanese who collaborated with his French-appointed government.

Meanwhile the Syrian and Lebanese Governments entered into an agreement for a common front in concluding negotiations with France, and for the establishment of a Syrian-Lebanese joint commission to consider mutual problems. As a result of the ensuing negotiations, General Catroux and the Syrian-Lebanese representatives signed on December 23 an agreement under which France transferred to the two republics for the duration of the war all legislative and administrative functions hitherto exercised by French authorities, effective Jan. 1, 1944. It was agreed, among other things, that all proceeds of the customs, postoffice, and telegraph services would henceforth be distributed equally between the two republics, with 20 per cent going into a common fund. This arrangement was approved by the French Committee of National Liberation, according to an announcement of December 25. However a spokesman for the Committee said that the accord did not void the French mandate over Syria and Lebanon.

See GREAT BRITAIN, EGYPT, IRAQ under *History*.

TAHITI. See FRENCH OCEANIA.

TAIWAN. See FORMOSA.

TAJIK SOVIET SOCIALIST REPUBLIC. See UNION OF SOVIET SOCIALIST REPUBLICS under *Area and Population*.

TALC, STEATITE TALC. Talc is a hydrous magnesium silicate; talc low in lime and iron oxide, generally with less than 1½ per cent of each, is considered to be of steatite grade, and sometimes is known simply as *steatite*. Steatite talc has come into war prominence as the ceramic material for radio and radar insulators and underwater sound instruments, for which a low power loss is essential.

Only about 5 per cent of all talc mined is of steatite grade. Total mine production of talc and soapstone in the United States, according to the Bureau of Mines, in 1942 was 350,554 tons, of which 305,392 tons was ground for sale. About 80 per cent of steatite production is in southeastern California, in the vicinity of Keeler, the balance being mined in Montana and New Mexico. Principal nonsteatite talc producing States are New York, which mines more than one-third of the national total, Vermont, North Carolina, California, Georgia, Maryland, and Nevada. Principal world producers of talc, pyrophyllite (a hydrous aluminum silicate), and soapstone in 1938, the last year for which complete figures are available, were United States (193,025 tons), Manchuria (81,215 tons), Italy (53,511 tons), Norway (23,703 tons), and British India (18,888 tons).

To provide adequate supplies of steatite talc for war uses, the War Production Board on Oct. 13, 1942, issued Order M-239 which forbade the use, sale, and delivery of steatite except for (1) insulators in communications, radio, radar, and underwater sound instruments; (2) spark plugs for certain war industries; (3) filtering of foods, flavoring extracts, and medicines; and (4) medicines and health supplies, not including talcum powder and cosmetics. The order was liberalized Feb. 6, 1943, to permit its use in electrical and heat insulation products (not including refractories), electric light bulbs, and experimental work. By Apr. 29, 1943, production and supplies were sufficient to enable further amendment removing all delivery and use restrictions, but establishing control over production and grading and providing a system of inventory control based on maximum consumer stocks.

Principal uses of talc, pyrophyllite, and ground soapstone sold by producers in the United States in 1942, according to the Bureau of Mines, were paint (filler), 32 per cent; ceramics, 13 per cent; roofing, 13 per cent; rubber, 10 per cent; paper, 8 per cent; toilet preparations, 5 per cent; insecticides, 4 per cent; and foundry facings, 2 per cent.

Steatite talc sold during 1943 for as much as \$43 per ton, f.o.b. mill. Most other grades ranged from \$18 to \$18.

CHARLES T. POST.

TANGANYIKA. A territory in East Africa administered, since 1919, by Great Britain under a League of Nations mandate. Area, 374,131 square miles. Population (1940), 5,231,983 (5,191,709 natives, 33,800 Asiatics, and 6,474 Europeans). Chief towns: Dar es Salaam (capital), 33,147 inhabitants, Kigoma, Tanga, Tabora, Lindi, Mikindani, and Kilwa. Education (1941): 20,109 students enrolled; £102,971 expended.

Production and Trade. The chief crops are sisal, coffee, cotton (51,000 bales), tea, sugar, groundnuts, sesame, and copra. Other important products include gold, diamonds, salt, tin, ghee, hides and skins, and timber (pencil cedar, mahogany, ebony, etc.). Livestock (1942): 5,593,717 cattle, 2,839,531 goats, 1,978,987 sheep. Trade (1941): imports £3,656,497; exports £5,679,861. The main import items were cotton piece goods, foodstuffs,

iron and steel manufactures, gasoline, and kerosene. Sisal, gold, cotton, coffee, hides, and skins were the main exports. Shipping (1939): 458 steamers (exclusive of coastal ships) cleared the ports. Roads (1942): 22,617 miles. Railways (1942): 1,377 miles.

Government. Budget (1943): £3,183,000 appropriated for expenditure. In 1942 revenue totaled £3,147,000; expenditure £3,132,000. The administration is under the control of a governor, assisted by an executive council. There is a legislative council of 13 official members and not more than 10 nonofficial members. Governor, Sir Wilfrid Jackson (app. June 19, 1941).

TANGIER. An internationalized district in northwestern Africa, including the port and city of Tangier, situated 15 miles across the Strait of Gibraltar from the British fortress. Area, about 225 square miles; estimated population, 80,000—mostly Moslems but including some 17,000 Europeans and 7,000 Jews. The city of Tangier had about 45,000 inhabitants.

Commerce, agriculture, fishing, and cigarette-making are the chief occupations. Leading crops are wheat, barley, and chickpeas. Imports in 1938 were valued at 94,693,830 French francs; exports, 11,380,286 francs. A French-controlled railway connects the city of Tangier with Fez, French Morocco, and with the French North African railway network. Highways and roads extend about 65 miles. Budget estimates for 1939: Receipts, 29,795,500 francs; expenditures, 29,653,312 francs.

Tangier was demilitarized, neutralized, and placed under the control of an international commission under the General Act of Algeciras of 1906, a series of agreements concluded in 1911 and 1912, a convention signed by Great Britain, France, and Spain on Dec. 18, 1923, and a protocol added to the convention on July 25, 1928. The protocol accorded Italy almost equal rights with the other three signatory powers in the administration of Tangier. For the international government established under the Tangier Convention, see the 1941 YEAR BOOK, p. 729. This administration was unilaterally abolished by Spain during 1940 over the protests of Great Britain and the United States. On June 14, 1940, troops from Spanish Morocco occupied Tangier "to guarantee the neutrality of the Zone and the City." The following November 4 the commander of the Spanish forces assumed the title of Military Governor of Tangier, representing the High Commissioner of Spanish Morocco, and disbanded the international administrative agencies. On November 23, the Spanish Cabinet approved legislation which, in effect, incorporated Tangier in Spanish Morocco. Spanish officials assumed control of most of the Zone's administrative services and also of economic and political affairs. On Mar. 16, 1941, they ousted the Mendoub, who was appointed by the Sultan of Morocco to supervise native affairs in the Tangier Zone. He was replaced by a Spanish-appointed native Pasha. The Spanish Military Governor in 1943 was General Iriarte. For 1943 events, see below.

History. With the open connivance of the Spanish authorities, the Tangier Zone remained a hotbed of Axis espionage and anti-Allied propaganda during 1943. The danger that Tangier might be used as a base for an Axis attack upon Allied communications in North Africa kept large American forces tied down in adjacent areas of French Morocco during most of the year (see Morocco under *History*).

The refusal of Great Britain and the French

authorities at Algiers to recognize the Spanish occupation of Tangier was again emphasized by developments. In January the Spanish High Commissioner formally affirmed that "Tangier forms part of the (Spanish) Moroccan Protectorate." The British Consul General in Tangier immediately advised him that Great Britain reserved all her rights under the Tangier Statute of 1925 and the Protocol of 1928. On March 4 the Spanish authorities in the Zone took over the postal, telegraph and telephone services, which had been operated by the French Ministry of Posts and Telegraphs. This brought an "energetic protest" from Gen. Henri Giraud, the French High Commissioner for North Africa.

At the end of May Spanish police in Tangier arrested and beat up more than 300 young Jews and Arabs who had volunteered at the French Consulate for military or labor service in French Morocco. Some of these youths were reportedly deported to Spanish Morocco. The police also picketed the office of a local British-owned newspaper, the *Tangier Gazette*. These actions were denounced as a violation of the interim Anglo-Spanish agreement of February, 1941, regarding the war-time administration of Tangier (see 1942 YEAR BOOK) in another formal protest registered by the British Consul General.

TANKERS. See SHIPBUILDING.

TANKS. See BUSINESS REVIEW under *Armament Production* (chart); **MOTOR VEHICLES.** For *Tank Tactics*, see MILITARY PROGRESS.

TARAWA. See GILBERT AND ELLICE ISLANDS; WORLD WAR, text and photographs.

TARIFF COMMISSION, U.S. An independent agency of the U.S. Government, created in 1916, which investigates and reports upon tariff matters. It also handles cases of unfair practices in import trade. The Committee makes such investigations and reports and furnishes such information as may be required by the President, the House Ways and Means Committee, the Senate Finance Committee, or either branch of Congress. The full Commission consists of six members, appointed by the President and confirmed by the Senate for terms of 6 years each, one term expiring each year. Not more than three commissioners may be of the same political party. The work of the Commission falls into two groups, general administration and auxiliary services under the Secretary, and professional, scientific, and technical work under the Planning and Reviewing Committee. At present the major part of the Commission staff is assigned to activities involving extensive studies of a technical and economic nature in cooperation with the war agencies. Chairman: Oscar B. Ryder.

TASMANIA. See AUSTRALIA under *Area and Population*.

TAXATION. President Roosevelt, in his budget message to Congress in January, 1943, stated that "we should strive to collect not less than \$16,000,000,000 of additional funds by taxation, savings, or both during the fiscal year 1944." Such additional receipts, along with expected collections of \$35,000,000,000 from existing taxes, were expected to cover approximately 50 per cent of all Government expenditures, then estimated at \$104,000,000,000 for the year to end June 30, 1944.

Congress failed to authorize additional taxes in the course of 1943, although important changes were effected in tax legislation. Bills to provide

a small fraction of the huge sums requested by the President were passed in the House and approved by the Senate Finance Committee, with final enactment scheduled at the beginning of the 1944 session of Congress. A good deal of time elapsed before Congress went to work on a new revenue law because of the controversy that developed over pay-as-you-go legislation. When this issue was settled, a Congressional revolt developed against the Administration's tax proposals, particularly after it became evident that total expenditures would fall materially below the budget estimates and revenues would be larger. Neither house of the legislature, therefore was ready to provide materially more than \$2,000,000,000 of added tax revenues to the Federal Government.

Pay-As-You-Go Legislation. The lowering of personal income tax exemptions in the War Revenue Act of 1942, by adding some 23,000,000 persons to the income tax rolls, had greatly complicated the collection problems. It was reported that numerous wage earners who had never paid income taxes before would ignore their obligation, and that the Treasury would be confronted with an almost impossible collection problem in trying to force the payment of this levy. Withholding at the source, the obvious solution, required placing collections on a current basis. Nation-wide popular support was accorded the plan of Beardsley Rumml, chairman of the board of the Federal Reserve Bank of New York, to "forgive" taxes on 1942 incomes so as to place all taxpayers on a current basis, thus making it possible to withhold at the source the bulk of income taxes due on wages and salaries. The Treasury opposed the Rumml plan, however, on the ground that forgiveness of the tax on 1942 incomes would benefit chiefly persons in the higher brackets, and thus would run counter to the principle of progressive taxation which the Treasury has vigorously espoused.

The Rumml plan was rejected by the House of Representatives on three successive votes, although by quite narrow margins. After several unsuccessful attempts to put through a compromise, the Current Tax Payment Act was finally passed and signed by the President on June 9, 1943. As enacted, this law abated 75 per cent of the Federal income tax payable by individuals on either 1942 or 1943 incomes, whichever was the lower. The sums not abated are payable one-half on Mar. 15, 1944, and one-half on Mar. 15, 1945, in addition to the current tax then due. Income tax payments made on March 15 and June 15, 1943, were treated as current payments on 1943 income. Where the tax due for the forgiven year did not exceed \$50 it was abated in full, and an abatement of \$50 was granted the taxpayer owing between \$50 and \$66.67. The Current Tax Payment Act also provides that employers withhold 20 per cent of wages and salaries beginning July 1, 1943, after deducting exemptions at the annual rate of \$624 for single and \$1,248 for married persons, and \$312 for each dependent. Members of the armed forces, clergymen, agricultural workers, and domestics are not included under the withholding provisions.

The law changed drastically the method of filing personal income tax returns. Persons receiving wages and salaries of more than \$2,700, if single, and \$3,500, if married, and those expecting income in other forms of more than \$100, must file an estimate of the current year's taxable income and of withheld taxes on March 15, paying the balance of taxes found to be due for the year in four quarterly installments. The taxpayer may re-

vise this estimate of annual taxable income on each quarterly payment date. A penalty of 6 per cent is imposed for underestimating income by more than 20 per cent, and in the case of farmers by more than one-third. A final return for each year is to be filed on March 15 of the following year, and any additional tax is then payable. If payments were excessive, a refund of the overpayment is due the taxpayer.

One provision of the law reduces further taxes due on 1942 incomes from members of the armed services. Taxes owing at time of death by any person in the service are abated in full, and a special exemption of \$1,500 is allowed members of the armed forces over and above ordinary exemptions.

The Current Tax Payment Act, by accelerating receipt of personal income taxes in the Treasury and by providing for payment of half of the taxes on 1942 incomes not abated, was expected to add \$3,300,000,000 to Treasury revenues for the fiscal year 1944. Actual figures, however, indicated that collections would be more than \$5,000,000,000 greater, so that when Secretary Morgenthau presented proposals for a new revenue measure to the House Ways and Means Committee, he asked for \$10,500,000,000, instead of the \$16,000,000,000 first sought by the President. Mr. Morgenthau's program included \$6,530,000,000 to be raised through increases in the personal income tax; \$1,140,000,000 from a rise in the corporate normal and surtax from 40 to 50 per cent; \$2,490,000,000 from additional excise taxes, and \$400,000,000 from higher estate and gift taxes. Members of both parties criticized these proposals as excessive and unnecessary, and the House Ways and Means Committee proceeded to write a tax bill of its own of far less ambitious proportions.

The 1943 Revenue Bill. The House of Representatives finally passed on November 24 a revenue bill that was expected to provide \$2,139,000,000 of additional taxes to the Treasury. Almost two-thirds of this total was to be produced by increased excise taxes, including a rise from \$6 to \$9 per gallon in the excise on distilled spirits, from \$7 to \$8 per barrel on beer, and additions of 50 to 100 per cent in the tax on wine. Higher rates were specified in the bill on electric light bulbs, furs, luggage, toilet preparations, jewelry, telephone and telegraph messages, and admissions. The excise on passenger transportation was to be lifted from 10 per cent to 15 per cent. First-class local postage rates were to be increased from 2¢ to 3¢ per ounce, the air mail rate from 6¢ to 8¢, and several other postage rates were to be raised proportionately. It was specified, however, that these higher postage rates should lapse six months after the end of the war.

The House revenue bill provided for the integration of the Victory tax with the normal personal income tax, to meet popular demand for a simplification of the income tax structure. Abolition of the earned income credit and an increase in the normal tax from 6 to 10 per cent were specified, and married persons filing separate returns were to receive only a single person's exemption. The bill raised the corporation excess profits tax from 90 to 95 per cent, but increased the specific credit under this tax from \$5,000 to \$10,000 to aid small enterprises. Also, corporations using invested capital in determining their excess profits tax credit were allowed 1 per cent less on invested capital above \$5,000,000.

The Senate Finance Committee approved, at the end of the session in December, a tax bill

which reduced several of the excise tax increases approved by the House and rejected the plan to simplify the personal income tax, the Victory tax being retained at a 3 per cent rate, without post-war refund. The earned income credit was to be disallowed, as in the House bill. The excess profits tax rate increase was allowed to stand, but the reduction in the percentage return allowed on invested capital was made less severe. The Senate Finance Committee bill was expected to yield \$2,284,000,000. Final enactment of the revenue measure into law was left for the 1944 session of Congress.

The Senate Finance Committee also was asked by the Treasury for \$10,500,000,000 in additional taxes. Like the House Ways and Means Committee, the Senate Committee flatly rejected the Treasury's proposals. An effort to adopt a general Federal sales tax failed to win the approval of the committee, owing to bitter Administration opposition and hostility from organized labor.

Contract Renegotiation Revision. The revenue bill passed by the House included a number of changes in the law providing for renegotiation of Government contracts. Most important of these changes were:

(1) Exemption from renegotiation was extended to concerns who deliver less than \$500,000 of goods and services under war contracts in any one year.

(2) Contracts for agricultural commodities were exempted.

(3) Contractors could appeal to the United States Tax Court on matters of fact as well as law in renegotiation cases.

(4) A five-man Joint Price Adjustment Board (q.v.) was set up to hear appeals from decisions by renegotiation officers of the individual procurement agencies.

The Senate Finance Committee ordered far more drastic changes in contract renegotiation procedure, adoption of which, the Treasury claimed, would make the renegotiation statute ineffective. The Senate Finance Committee bill exempted contracts for "standard commercial articles" from renegotiation. It provided that subcontractors whose products did not actually enter into goods bought by the Government, such as machine tool and other machinery manufacturers, were to be exempted from renegotiation retroactively. The committee bill also specified that renegotiation cases already closed could be appealed, and made the Court of Claims the appeals tribunal. Perhaps most important was the provision in the committee's bill that renegotiation should apply to income after, rather than before, Federal income and excess profits taxes. Treasury spokesmen claimed that these changes would not only make renegotiation ineffective for the future, but would make it necessary for the Treasury to refund very large sums to corporations which had already agreed to settlements with the Government involving repayment of billions of dollars.

Social Security Changes. Social Security bills were introduced in Congress by Senators Wagner and Murray and Representative Dingell to put into effect recommendations of the National Resources Planning Board for a "cradle-to-grave" insurance plan, which the President had transmitted to Congress on March 10. These bills provided for increased benefits and wider coverage, with the payroll tax increased to 6 per cent for employees and 6 per cent for employers, as compared to the existing rate of 1 per cent for each. Congress not only refused to act upon these proposals, but instead suspended for 60 days the increase to 2 per cent in the payroll tax scheduled to take place under existing law on Jan. 1, 1944. Senator Vandenberg sponsored an amendment to the tax law

to freeze the 1 per cent payroll tax rate to Jan. 1, 1945.

Federal Tax Policy. The attitude of Congress toward tax legislation during 1943 reflected more clearly than any other actions of the legislature the refusal of that body to proceed with reform measures during the war. While appropriations for war were voted freely, and the debt limit was lifted to \$210,000,000,000 without resistance, the President's executive order limiting salaries to \$25,000 after taxes was rescinded by law. A rider was attached to the bill to lift the debt limit allowing salaries to be paid up to the amounts that were paid on Dec. 7, 1941. The President, fearing to interfere with Federal financing, permitted this measure to become law without his signature. Congress ordered both the National Resources Planning Board and the National Youth Administration liquidated in 1943.

Congress also refused to consider substantial increases in income taxation on either individuals or corporations. While the proximity of the Presidential elections was a factor, it is more correct to say that the stand of the majority of legislators toward taxes was a culmination of a more conservative trend that had been in evidence in the preceding session.

State Taxation. The accompanying table shows State tax collections in major categories for the fiscal year 1943. For tax laws enacted, repealed, or amended see the article on STATE LEGISLATION. See also SOCIAL SECURITY.

See also UNITED STATES under *Congress*; countries and territories under *History*; INTERNAL REVENUE, BUREAU OF. For tax revenues, see PUBLIC FINANCE; also the subject as LIQUOR INDUSTRY, TOBACCO, ROADS AND STREETS. For effect of taxation on profits, see BUSINESS REVIEW, FINANCIAL REVIEW, and various industries.

JULES I. BOGEN.

TAX COURT OF THE UNITED STATES. An independent agency of the U.S. Government (formerly the U.S. Board of Tax Appeals, created by the Revenue Act of 1924). Its function is to determine, after hearing, whether there is a deficiency or an overpayment, where deficiencies have been determined by the Commissioner of Internal Revenue, in income, profits, estate, gift, and unjust enrichment taxes, and personal holding company surtaxes; to adjudicate controversies relating to excess profits on Navy contracts and Army aircraft contracts; and to review the action of the Commissioner in deficiency and refund cases founded on claims of abnormalities under excess profits and processing tax statutes. Presiding Judge: J. Edgar Murdock.

TEACHERS, Shortage of. See EDUCATION; EDUCATION, U.S. OFFICE OF. For Teachers' Salaries, see SCHOOLS.

TECHNICOLOR. See PHOTOGRAPHY. Compare MOTION PICTURES.

TEHRAN CONFERENCE. See GERMANY, GREAT BRITAIN, IRAN, UNION OF SOVIET SOCIALIST REPUBLICS under *History*; UNITED NATIONS; WORLD WAR.

STATE TAX COLLECTIONS IN 1943
(dollar amounts in thousands)

State	End of fiscal year	Total amount	Per capita	Sales and gross receipts	Licenses	Individual income	Corporation income	Property	Death and gift	Severance	Other taxes
Ala.....	Sept. 30, 1942	74,143	26.17	39,621	8,859	5,863	(a)	5,288	64	544	741
Ariz.....	June 30, 1943	28,113	56.31	13,750	1,633	2,875	(a)	5,650	64	.....	.....
Ark.....	June 30, 1943	48,461	24.86	27,971	5,397	1,476	2,017	3,872	146	1,178	.....
Calif.....	June 30, 1943	498,887	72.23	216,908	25,455	39,351	52,887	13,444	6,865	573	.....
Colo.....	June 30, 1943	b42,952	38.24	24,613	4,584	5,637	(a)	(c)	1,544	45	.....
Conn.....	June 30, 1943	84,489	49.43	27,074	9,318	.....	12,552	2,229	4,389	.....	.....
Del.....	June 30, 1943	12,923	48.49	3,757	4,938	1,963	.....	.....	834	.....	.....
Fla.....	June 30, 1943	b27,352	14.42	b7,240	9,391	.....	(c)	(c)	.....	(c)	.....
Ga.....	June 30, 1943	67,269	21.53	30,885	2,913	5,283	10,293	4,886	560	.....	328
Idaho.....	June 30, 1943	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
Ill.....	June 30, 1943	b302,512	38.31	172,707	b28,728	.....	.....	237	6,167	3,774	.....
Ind.....	June 30, 1943	b122,401	35.71	65,172	b14,863	.....	.....	8,035	1,323	.....	.....
Iowa.....	June 30, 1943	74,171	29.22	41,571	13,345	6,771	1,211	1,407	1,514	.....	209
Kan.....	June 30, 1943	59,188	32.86	28,171	6,705	4,237	1,793	7,229	339	.....	.....
Ky.....	June 30, 1943	61,260	21.53	25,928	6,283	4,203	3,708	6,879	1,314	33	319
La.....	June 30, 1943	b99,525	42.10	b43,977	b9,620	9,042	(a)	7,850	b99	13,850	.....
Maine.....	June 30, 1943	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
Md.....	Sept. 30, 1942	71,305	39.15	24,300	8,686	7,658	2,835	4,447	1,737	.....	311
Mass.....	Nov. 30, 1942	169,255	39.21	43,655	39,702	24,234	723	15,053	8,303	.....	243
Mich.....	June 30, 1943	234,377	44.59	123,691	36,840	.....	.....	13,034	4,276	615	.....
Minn.....	June 30, 1943	107,952	38.66	38,641	11,425	21,438	563	9,749	968	10,389	39
Miss.....	June 30, 1943	50,832	23.28	31,263	4,801	3,465	4,067	1,125	138	304	116
Mo.....	Dec. 31, 1942	103,932	27.46	52,892	15,250	9,941	(a)	4,882	1,800	.....	.....
Mont.....	June 30, 1943	17,405	31.11	7,180	1,275	1,202	1,425	1,716	213	854	.....
Neb.....	June 30, 1943	27,467	20.87	14,288	1,786	.....	.....	6,069	48	.....	888
Nev.....	June 30, 1943	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
N.H.....	June 30, 1943	15,559	31.65	5,553	3,418	735	.....	981	901	.....	.....
N.J.....	June 30, 1943	160,549	38.59	37,337	20,938	.....	.....	27,603	8,825	.....	.....
N.M.....	June 30, 1943	20,565	38.67	11,647	2,597	1,056	(a)	2,563	56	779	18
N.Y.....	Mar. 31, 1943	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
N.C.....	June 30, 1943	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
N.D.....	June 30, 1943	18,518	28.85	9,824	1,989	1,844	(a)	4,042	107	.....	.....
Ohio.....	Dec. 31, 1942	277,256	40.14	169,209	43,351	.....	.....	8,094	3,199	.....	.....
Okla.....	June 30, 1943	78,671	33.67	42,481	9,524	10,117	(a)	26	566	8,540	3
Ore.....	June 30, 1943	52,594	48.27	13,403	5,285	10,938	7,239	780	82	116	.....
Penn.....	May 31, 1943	409,640	41.38	105,555	88,557	.....	50,753	16,006	13,927	.....	573
R.I.....	June 30, 1943	36,391	51.01	11,225	7,055	.....	.....	2,574	.....	.....	.....
S.C.....	June 30, 1943	52,122	27.44	27,636	3,707	3,420	9,116	1,564	193	20	240
S.D.....	June 30, 1943	16,294	25.34	11,390	2,009	557	393	174	94	779	.....
Tenn.....	June 30, 1943	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
Texas.....	Aug. 31, 1942	174,509	27.20	80,145	19,070	.....	.....	21,494	2,732	30,935	2,212
Utah.....	June 30, 1943	28,338	51.49	12,374	2,224	2,051	1,304	3,155	302	781	.....
Vt.....	June 30, 1943	11,963	33.30	4,227	2,961	920	690	525	223	.....	389
Va.....	June 30, 1943	73,196	27.33	30,312	12,547	4,522	7,843	4,273	732	30	1,530
Wash.....	Mar. 31, 1943	120,452	69.38	81,073	6,739	.....	.....	4,649	1,671	175	154
W.Va.....	June 30, 1943	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
Wis.....	June 30, 1943	138,364	44.10	32,237	16,872	19,047	32,756	14,414	1,971	4	11
Wyo.....	Sept. 30, 1942	8,874	35.39	5,549	1,396	.....	.....	532	21	.....	.....

a Included with individual income tax. b Incomplete. c Figures not available.

TELEGRAPHY, TELEPHONY. See COMMUNICATIONS, ELECTRICAL; also, FEDERAL COMMUNICATIONS COMMISSION; WAR COMMUNICATIONS, BOARD OF. For *Telegraph Merger*, see also UNITED STATES under *Enactments*.

TELEPHOTO LENSES. See PHOTOGRAPHY.

TELETYPEWRITER. See WAR COMMUNICATIONS, OFFICE OF.

TELEVISION. See COMMUNICATIONS under *Television*.

TEMPERANCE ORGANIZATIONS. See SOCIETIES.

TENNESSEE. An east south central State. Area: 42,-246 sq. mi. Population: 2,915,841 (1940 census); 2,862,211 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Prentice Cooper (Dem.), inaugurated in January, 1943, for his third four-year term; Secretary of State, Joe C. Carr; Attorney General, Roy H. Beeler.

TENNESSEE VALLEY AUTHORITY (TVA). A corporation created by Congress in 1933 to develop the Tennessee River System in the interest of navigation, control of floods, and the generation and disposition of hydroelectric power. It conducts a program of water control and conservation, including fertilizer research. The TVA is constructing a system of dams (q.v.) which will provide a nine-foot navigable channel from the mouth of the river near Paducah, Ky., to Knoxville, Tenn., 648 river miles. The Tennessee basin includes parts of seven States, an area of 41,000 square miles with a population of about 3,000,000.

The Corporations's power-producing system has an installed capacity of 1,639,000 kw, and new capacity authorized for war production purposes, with WPB allocations, will bring the total to 2,100,000 kw in 1945. For war purposes the TVA is producing ammonium nitrate, pure elemental phosphorus, and calcium carbide.

As of June 30, 1943, the corporation had contracts for sale of power at wholesale with 80 municipalities, 3 counties, 45 cooperatives, and 22 privately owned utility companies. These agencies (the private companies excluded) distribute power to more than 500,000 ultimate consumers under retail rates agreed upon with the Authority. The corporation had contracts for bulk sales of firm and secondary power with 10 large industrial concerns. It is also providing power to 8 projects, plants, and bases of Federal agencies.

Since 1933 the corporation and various municipalities and nonprofit cooperative associations have purchased from utility companies the electric generating, transmission and distribution facilities in an area which includes substantially all of Tennessee except the northeastern portion, northern Alabama, and northeastern Mississippi. The contract prices for these properties have aggregated about

\$116,000,000, of which the Authority's share, principally for generating plants and transmission facilities, has been about \$55,000,000.

There are now 28,000 employees. The standard workweek is 40 hours, with time and one-half for overtime for all hourly employees. Chairman: David E. Lilienthal.

See DAMS; FLOOD CONTROL; TUNNELS; WATERWAYS, INLAND.

TENNIS. If it were not for the championships at Forest Hills in September one might review the 1943 tennis campaign in a few words. But Uncle Sam's generosity in granting passes to many stars in the service provided enough talent to produce the big show and once again the national tournament saved the sport from an otherwise colorless year.

Francisco (Pancho) Segura, the Ecuadorean with the two-handed grip, was made a top-heavy favorite after his victories in the Pan-American, Eastern intercollegiate, national intercollegiate, New Jersey, Rye, and Southampton tournaments, and promptly justified his ranking by blasting Richard Bender, Pfc. Bitsy Grant, and Seymour Greenberg out of the blue-ribbon classic on the sacrosanct courts of the West Side Tennis Club. But it was Pancho's misfortune to run head-on into a well-muscled Coast Guardsman, one Jack Kramer, in the semi-final round. Kramer, at his peak, scored 17 service aces and smashed Pancho's best offerings to all corners of the court to win at 2-6, 6-4, 7-5, 6-3.

Meanwhile Lt. (j.g.) Joe Hunt, one-time collegiate champion from Annapolis, was overcoming some rough sailing to reach the title round. He turned back the threat of Corp. Frank Parker, 8-6, 6-2, 6-3, then took the measure of Billy Talbert in four hard sets. Then Hunt met Kramer in the all-service final before a huge crowd. The score seesawed for two sets, then the naval lieutenant pulled up from 3-5 to take the sizzling third set at 10-8 and Kramer never came back. The final score read 6-3, 6-8, 10-8, 6-0. Ensign Ted Schroeder was unable to get away from his naval duties to defend the crown he had won in 1942.

The men's doubles title was captured by Kramer and Parker, who defeated Talbert and Pfc. David Freeman, 6-2, 6-4, 6-4, to succeed Talbert and Lieut. Gardnar Mulloy of the Navy as the cup holders. Blonde Miss Pauline Betz of Los Angeles retained the women's singles crown when she repeated her 1942 victory over Miss Louise Brough of Beverly Hills, 6-3, 5-7, 6-3. Miss Brough and Miss Margaret Osborne of San Francisco triumphed in the women's doubles for the second straight time while Miss Osborne and Talbert paired to capture the mixed doubles in a thrilling final with Miss Betz and Segura that ended at 10-8, 6-4.

Her victory at Forest Hills climaxed a most successful year for Miss Betz in singles competition. She also triumphed in the national indoor and clay-court championships. However, the titleholder figured in one of the season's biggest upsets when she bowed to Miss Marchetta Ruth Donnelly, 19-year-old Californian, an unseeded player, by 6-4, 6-4 in the Pacific Southwest tourney.

THOMAS V. HANEY.

TERRITORIAL DISPUTES. See ALBANIA, BOLIVIA, BULGARIA, CHILE, FINLAND, GREECE, HUNGARY, POLAND, RUMANIA, THAILAND, and YUGOSLAVIA, under *History*.

TERRITORIES AND ISLAND POSSESSIONS, Division of. The Division of the U.S. Department of the Interior which administers the territories and possessions of the United States. See the separate article on each. Director in 1943: B. W. Thoron.

TEXAS. A west south central State. Area: 267,339 sq. mi. Population: 6,414,824 (1940 census); 6,336,554 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Coke Stevenson (Dem.), inaugurated in January, 1943, for a two-year term; Lieutenant Governor, John Lee Smith; Secretary of State, Sidney Latham; Attorney General, Gerald C. Mann. See ANTIMONY; AQUEDUCTS; HURRICANES.

TEXTILES. Over-all textile production in 1943 fell approximately 5 per cent below the peak level obtained in 1942, although in some branches of the industry—notably rayon—new production records were established. Failure of the industry to equal its 1942 performance was due primarily to increasing labor difficulties, while uncertain and absolutely unsatisfactory pricing methods also contributed to the industry's difficulties.

Failure to maintain output at the previously established record pace clashed with continued peak demand for military, export, and essential civilian purposes, thus creating serious new distribution problems for the industry. This was particularly in evidence in cotton and rayon goods. While in 1942 approximately 60 per cent of cotton goods production was against rated orders—for Government or essential civilian purposes—this share rose to over 67 per cent in 1943.

Priorities. Priority difficulties increased as the year progressed and led to two significant Government actions toward the close of 1943. These were:

- (1) The establishment of a new rating pattern system through the issuance of a new Conservation Order M-317 in conjunction with a basic revision in the Limitation Order L-99; and
- (2) The issuance on Nov. 16, 1943, of a special consumer goods directive by the Office of Economic Stabilization (the so called Vinson Directive) for the purpose of stimulating the production of low-priced textile and apparel goods.

The new textile priority system aims at a more equitable distribution of priority rated orders among all textile mills. It has such broad aspects however and—in the opinion of the textile industry—was delayed so long that considerable time will be needed to overcome the initial disruption in established trade channels between suppliers and users of yarn caused by it.

The Vinson Directive is aimed at an increase in production of low-priced textile and apparel goods but in the opinion of the industry it is not likely

to attain this goal, because it is based on unsatisfactory profit margins. The directive establishes a method by which the War Production Board can issue orders for increased production of essential consumer goods, particularly in the low price category, and provides that, where such action is taken, the Office of Price Administration under certain circumstances may be called upon to grant price concessions for such products. The formula for these price concessions is based on a 2 per cent profit margin, before taxes, for manufacturers whose over-all profits are not larger than double the amount obtained during the base period 1936 to 1939. Where profits have been doubled over that period manufacturers can be asked to produce their assigned quotas under such programs at cost. By the end of the year no programs had actually been launched under this directive, although several were in preparation—notably one on bed linen and one on chambrays.

European Relief. Toward the end of the year preparations were progressing rapidly for the anticipated large textile demands in connection with European relief and rehabilitation needs in the liberated areas. The Office of Foreign Relief and Rehabilitation Operations made some preliminary studies which indicated that approximately 35 per cent of the population in liberated Europe will be in need of textile relief. The OFRRO late in 1943 started to prepare two textile relief programs, each for 3,500,000 persons, and each based on an expenditure of approximately \$56,000,000. These programs are based on a typical man's wardrobe consisting of a mackinaw, sweater, trousers, shirt, cap, gloves, underwear, socks, and shoes; while the wardrobe for women is to include sweater, blouse, skirt, gloves, underwear, stockings, and shoes. Textile relief needs will be substantial but are to be handled in such a way that markets will not be unduly disturbed. They are expected to reach about 3 per cent of the total volume of the industry.

Manpower. Manpower problems multiplied in the textile industry in 1943, reflecting both a loss in total workers and a decline in workers' efficiency. The total number of workers employed in cotton goods manufacture, which stood at 503,600 at the end of 1942, dropped to 472,000 by October of last year. Labor costs continued to increase. The hourly wage rate in cotton manufacturing increased to 59.3 cents, as compared with an average of 36.8 cents in 1936. Weekly average wage payments stood at close to \$25 at the end of 1943, as compared with \$13.31 in 1938.

The manpower problem in the industry was aggravated by the fact that existing price ceilings make it impossible for many mills to pay overtime rates. This was particularly pressing in instances where labor shortages forced mills to abandon three shift operations.

Textile prices last year showed little fluctuation, except for raw cotton. The Bureau of Labor group index of textile prices showed only minor gains in 1943 as shown in the following table:

INDEXES OF WHOLESALE TEXTILE PRICES
(1926 = 100)

	1940	1941	1942	December 1943
Textile products.....	73.8	84.8	96.9	97.7
Cotton goods.....	71.4	94.2	112.4	112.9
Rayon.....	29.5	29.7	30.3	30.3
Woolen & worsted goods	85.7	96.6	110.4	112.5

Cotton Goods. Production of cotton fabrics in 1943, as measured in terms of raw cotton consump-

tion, dropped approximately 8 per cent below the peak established in 1942. It is estimated at approximately 11,000,000,000 square yards, of which 4,000,000,000 square yards were for military purposes. Civilian production against preference ratings amounted to about 2,800,000,000 square yards so that for unrated civilian purposes only about 4,200,000,000 square yards were available. Production in 1942 was 8,300,000,000 yards. Despite the fact that production fell off slightly from 1942, it continued considerably above the prewar level of 8,600,000,000 square yards for the 1936-39 average.

Basic cotton goods statistics, as compiled by the Cotton Textile Institute, are shown in the following table:

COTTON GOODS ACTIVITY

	<i>Raw Cotton Consumed (Bales)</i>	<i>Spindles in Place</i>	<i>Spindles Active</i>	<i>Processed,* lb. per Active Spindle</i>
1933...	6,210,600	31,442,174	26,894,860	122.8
1934...	5,419,137	30,938,340	27,742,462	105.7
1935...	5,650,670	30,889,484	26,700,946	117.6
1936...	7,103,765	29,253,444	24,664,428	148.5
1937...	7,417,991	27,700,194	25,419,110	151.9
1938...	5,902,272	26,704,476	24,774,004	132.0
1939...	7,369,361	25,986,620	23,781,050	163.3
1940...	8,037,848	24,945,602	23,585,938	177.0
1941...	10,583,550	24,532,146	22,926,435	229.0
1942...	11,436,312	23,843,858	22,133,175	258.4
1943...	10,657,643	23,340,190	22,752,220	234.2

* Processed per average active spindle, in lb.

Production of cotton yarns in 1943 dropped approximately 11 per cent below 1942 when production of carded yarn was 778,000,000 pounds and the production of combed yarns totaled 288,000,000 pounds. In 1942 sales yarn output had been almost double the production in 1939. Despite the high rate of output military and essential demands outran production to such an extent that the War Production Board in several instances had to resort to special yarn allocations by directives in order to safeguard supplies for certain essential civilian programs. Cases in point were the allocations for underwear mills and for children's and infants wear.

The outstanding development in the yarn field was the fact that, as far as military demands were concerned, less emphasis was placed on combed yarns so that the percentage of carded yarns taken for war purposes increased.

Cotton goods prices—under rigid ceilings—held stationary in 1943. On May 4, 1942, the Office of Price Administration abandoned the "sliding scale" pricing principle for cotton goods under which these prices had been automatically adjusted to fluctuations in the price of raw cotton. Prices were fixed on the basis of 20.37 cents per pound of raw cotton. These same ceiling prices remained in effect throughout the balance of 1942 and 1943. These prices were generally regarded as adequate when they were established. However, late in 1943 mill margins dropped sharply, due to higher raw materials and manufacturing costs.

Rayon. Total 1943 rayon production, both yarns and staple fiber, is reported at 663,100,000 pounds by *Rayon Organon*, official statistical publication of the industry. This was an increase of 5 per cent over 1942 output of 632,600,000 pounds and established a new all-time record.

Heavy wartime needs for rayon, for direct military purposes and to meet essential civilian apparel needs, drove consumption in 1943 to a level of 656,200,000 pounds, as compared with 620,600,000 pounds in 1942. Year-end stocks of rayon were down to the insignificant level of 7,900,000 pounds of which 6,100,000 were filament yarns, the bulk

of which was set aside for military orders and shipments to Latin American countries.

Rayon yarn production amounted to 501,100,000 pounds in 1943 as compared with 479,300,000 pounds in 1942. The increase in rayon staple fiber output was from 153,285,000 pounds in 1942 to 162,019,000 pounds in 1943.

In analyzing production trends, *Rayon Organon* pointed out that there were divergent trends in the various branches of the industry. Viscose plus cuprammonium filament yarns showed an increase in production of 9 per cent to 338,511,000 pounds, principally due to the continued expansion of the rayon tire yarn program. Production of tire cords in 1944 is to be stepped up to a 240,000,000 pound annual rate. Acetate filament yarn output, on the other hand, showed a decline of 4 per cent from the 1942 figure of 168,855,000 pounds. The principal cause for the decline was seen in the shortage of essential raw materials.

Distribution of rayon yarn by principal users during 1943 and 1942 compared as follows:

	<i>(Units are Millions of Pounds)</i>			
	<i>Viscose-Cupra</i>	<i>Acetate</i>		
	1943	1942	1943	1942
Hosiery.....	40.8	44.9	8.4	4.4
Other knit.....	37.5	40.9	18.6	15.4
Broad woven & tires.....	226.5	197.9	133.9	145.7
Narrow woven.....	10.1	8.4	0.3	0.3
Miscellaneous.....	16.5	9.4	1.6	1.5

Mounting military and essential civilian needs forced a further scaling down in rayon quotas for civilian uses, notably for hosiery and other knit goods production. Chief war uses of rayon are tire yarns and fragmentation, aerial delivery, flare and similar parachutes. Between 50 and 60 million pounds of rayon tire cord were shipped in 1943, so that production still is a long way from the new 240,000,000 pound goal. Reflecting the large demand for the tire yarn and parachute programs, a decided trend toward larger production of coarser grades of rayon developed in 1943. This was in reversal of a long-established trend toward increased output of finer rayon yarns.

Nylon. Nylon yarn capacity was greatly increased in 1943 but no figures are available for military security reasons. All nylon output is frozen for military purposes, principally for use in parachute cloths and for cords and tapes used in the manufacture of escape chutes. Only moderate quantities of nylon "rejects" were released in 1943 for civilian purposes.

It is now believed that nylon capacity has been increased to such an extent that it could fill most needs of the full fashioned hosiery industry. (This statement is credited to Robert A. Ramsdell, sales director of the DuPont Co.'s nylon division.) Before the war nylon was in sufficient supply to account only for about 20 per cent of the hosiery industry's needs.

Extensive research into peacetime uses of synthetic fibers is now being conducted. Heavy nylon poundage will be needed, in addition to hosiery, for gloves, foundation garments, and woven goods. *Vinyon* will go into industrial filters, surgical goods, underwear, and shoes. *Staple fiber* will be widely used in sports fabrics, decorative fabrics, and floor coverings. *Casein fabrics* will go into dress goods, interlinings and in the place of wool. *Glass* and *saran fiber* have important industrial and decorative uses ahead. *Soybean fibers* have a large prospective market in the automotive industry.

Wool. Wool experienced a complete reversal in trend in 1943. This was highlighted by the fact that toward the end of the year the War Produc-

tion Board lifted virtually all restrictions on the use of wool. Two factors combined to account for this: a sharp cutback in military requirements and an increase in supplies from both domestic and foreign sources. As a result, emphasis shifted to the advisability of a reduction in Government owned stockpiles of wool accumulated since the start of the war.

Over-all production of wool cloth in 1943 dropped approximately 10 per cent from 1942, according to (preliminary) figures compiled by the National Association of Wool Manufacturers.

The trend toward the end of the year revealed that sales of woolen and worsted mills to the Government were down about 50 per cent from previous peak levels while civilian fabric sales for men's wear showed an increase of 60 per cent and those for women's wear were up 45 per cent.

Machinery activity in the wool industry showed the following trend:

WOOL MACHINERY ACTIVITY
(Weekly averages in thousands of active hours)

	January, 1942	January, 1943	December, 1943
Looms			
Woolen and Worsted			
Broad.....	2,850	2,676	2,448
Narrow.....	89	63	65
Carpet and rug ^a			
Broad.....	122	63	53
Narrow.....	105	40	36
Spinning spindles			
Woolen.....	118,654	124,120	115,024
Worsted.....	120,806	112,922	106,763

^a Carpet and rug looms converted to mfr. of blankets and cotton fabrics and looms now operating entirely on cotton yarns have been excluded beginning Jan. 1, 1942 and July 1, 1942, respectively.

For the 53 week period from January to December, 1943, woolen and worsted looms of all types worked 2,730,000 hours on a weekly average basis compared to 2,813,000 hours during a like 53 week period in 1942. Woolen spinning spindles averaged weekly 124,613,000 hours for 53 weeks of 1943 (122,862,000 in 1942). Worsted spinning spindles averaged weekly 112,121,000 hours for the 53 weeks of 1943 (114,022,000 in 1942).

Raw wool consumption, including apparel and carpet, in 1943 totaled (on a scoured basis) 636,-139,000 lb. (603,555,000 in 1942).

Employment in the wool industry dropped approximately 13,000 workers. Employment in woolen and worsted mills established its peak in 1941. In 1942 it dropped 2.7 per cent, while in 1943 a further decline of 7.3 per cent occurred. Total mill payroll disbursements increased approximately 8 per cent in 1943.

Burlap. Consumption of burlap in the United States in 1943 fell to 387,000,000 yards as compared with 422,000,000 yards in 1942. Stocks in this country at the end of the year totaled 76,000,000 yards as against 198,000,000 yards a year earlier. Stocks in Calcutta also declined during the year and stood at 511,000,000 yards at the end of 1943 as compared with 632,000,000 yards twelve months earlier. All buying of burlap in India was taken over by the Government in 1943 and handled through a Central Burlap Office. Large purchases were made in India for the account of the Government. However, transportation difficulties in India—rather than the shipping situation—thus far have held arrivals in the United States below expectations so that restrictions on the use of burlap had to be carried over into 1944.

See BUSINESS REVIEW; CHEMISTRY under *Textiles*; COTTON; FASHION EVENTS.

H. E. LUEDICKE.

THAILAND (SIAM). A constitutional monarchy of southeastern Asia, occupied by Japanese armed forces Dec. 8, 1941. Capital, Bangkok. King, Ananda Mahidol, who was born Sept. 20, 1925, and ascended the throne upon the abdication of his uncle, Prajadhipok, on Mar. 2, 1935.

Area and Population. Area, 200,148 sq. mi., excluding annexations from French Indo-China in 1941 (see 1942 YEAR BOOK, p. 651) and from Burma in 1943 (see below under *History*). Estimated population on Mar. 31, 1940, 15,713,000 (14,464,489 at 1937 census). Bangkok had 684,-994 inhabitants in 1937; Chiangmai, 544,000; Ayuthia, 300,000. Nine-tenths of the people are Thai (or Siamese). There were in Thailand at the time of the Japanese invasion some 500,000 Chinese, 500,000 Indians and Malays, 60,000 Cambodians, and about 2,000 Europeans and Americans.

Education and Religion. There is free and compulsory primary education, but only about 35 per cent of the adult population are literate. As of Mar. 31, 1939, there were 12,809 government, local public, and municipal schools, with a total of 1,567,745 pupils. Bangkok has two state-controlled universities. The religious composition of the population in 1937 was: Buddhists, 13,752,091; Mohammedans, 626,907; Christians, 69,227; others, 15,880.

Production. Over four-fifths of the working population is engaged in agriculture and fishing. The chief crop is rice, which is both the main article of diet and the principal export. Production in 1940-41, 4,923,350 tons of cleaned rice. Other leading crops are tobacco, coconuts, pepper, and cotton. Rubber and tin ore are the most important products after rice. Rubber shipments were 45,000 metric tons in 1940. The metal content of tin ore exported in 1940 was 17,700 metric tons. Teak lumbering is an important industry. Manufacturing is largely restricted to lumber and rice milling.

Foreign Trade. For the year ended Mar. 31, 1941, merchandise imports were valued at 183,400,000 bahts (128,200,000 in 1939-40); exports, 257,-600,000 bahts (208,700,000). Values of the chief 1940-41 exports were (in millions of bahts): Rice, 142.8; tin ore, 48.4; rubber, 39.3; teak wood, 5.9. Rice exports totaled 1,625,400 metric tons; rubber, 43,700 metric tons.

Finance. The budget was changed to the Christian calendar year basis beginning Jan. 1, 1941. Ordinary budget estimates for 1942 placed receipts at 210,000,000 bahts and expenditures at 259,000,000; in 1941 they balanced at 138,000,000 bahts. There was a treasury reserve estimated at 31,857,465 bahts on Jan. 1, 1942. Public debt on Sept. 30, 1941, £4,977,988 (external) and 24,-707,100 bahts (internal). The baht exchanged at an average of \$0.3515 in 1940.

Transportation. At the time of the Japanese invasion, Thailand had about 2,048 miles of railway line, 5,574 miles of highways, and state-controlled airlines linking the principal cities. Air connections with Japan were opened in 1942. During 1939-40 a total of 960 vessels of 1,425,989 tons entered the port of Bangkok.

Government. The constitution of Dec. 10, 1932 transformed Thailand from an absolute into a limited monarchy. Nominally the King exercises executive power through a State Council (Cabinet), and legislative power through an Assembly of 181 members, to which the State Council is responsible. Half the members of the Assembly were elected by popular vote and half nominated by the Crown. Actually, there was an unofficial dictatorship headed by Premier (later Field Marshal) Luan; Pibul Songgram (appointed Dec. 17, 1938). Al

though he reached his eighteenth birthday in September, 1943, King Ananda Mahidol remained in school in Switzerland. Premier Songgram and a few other leading members of the State Council cooperated with the Japanese invaders, who occupied the country beginning Dec. 8, 1941. On Dec. 21, 1941, the Premier signed a ten-year treaty of alliance with Japan and on Jan. 25, 1942, he declared war on Britain and the United States. This policy was repudiated by Thai diplomatic representatives in the United States and most of the other United Nations. It was reported to have been opposed by some ousted members of the Thai Government and Assembly. According to a Bangkok radio broadcast of Oct. 16, 1942, the Assembly agreed to transfer its powers to the Government for the duration of the war. For developments in 1943, see below.

History. Little news of developments in Thailand reached the outside world during 1943, except in the unreliable form of Japanese-controlled radio broadcasts. These broadcasts, coupled with moves made by members of the United Nations, indicated

that a propaganda battle was under way for the sympathy and goodwill of the Thai people. Meanwhile the war surged closer about the Japanese-dominated kingdom. There were increasingly heavy Allied air attacks upon Bangkok and other Thai communications centers by American and British planes based in both China and India.

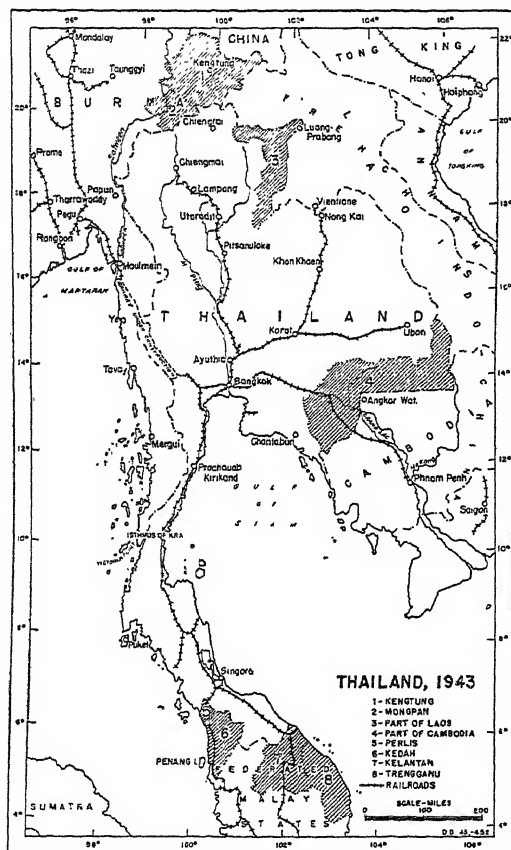
Japanese propaganda for Thai consumption during the year tended to substantiate reports of widespread passive resistance to the Japanese and the pro-Japanese government at Bangkok. A statement by Premier Tojo of Japan, asserting that the Japanese had not violated Thailand's territorial integrity, was broadcast early in February. The Bangkok radio meanwhile issued frequent statements designed to counteract charges of graft leveled at Premier Songgram and to allay discontent arising from food shortages and the stagnation of trade. Songgram's wealth, the broadcasts declared, came from his private income and from sums contributed by merchants and the public "on such occasions as his birthday." On February 13 the Bangkok radio announced the resignation of the Premier and his entire Cabinet, but subsequent reports indicated that Songgram had remained at the head of a reorganized Cabinet.

Toward the end of February Gen. Chiang Kai-shek, the Chinese Nationalist leader, appealed to the Thai people to resist the Japanese. He pledged Chinese aid in ousting the invaders and in restoring the complete independence of Thailand. The assurance that China had no territorial designs on Thailand was backed by President Roosevelt in a statement issued March 12. An important Japanese propaganda maneuver followed on July 5. The Tokyo radio announced that Premier Tojo had visited Bangkok on July 3-4 during his tour to "prepare the new policy for the southern region." While he was in Bangkok Tojo and Premier Songgram issued a joint communiqué announcing the transfer to Thai sovereignty of two districts in the Shan States and the four northernmost of the Malay States, shown in the accompanying map.

The two Shan States territories, Kentung and Mongpan, had an area of 15,388 square miles, with a 1941 population of about 256,000. The four Unfederated Malay States of Perlis, Kedah, Kelantan, and Trengganu had a combined area of 14,770 square miles, or about one-fourth of the total area of British Malaya, and a population of about 1,100,000. These four states had been ceded by Thailand to the British in 1909. Japanese propaganda made the most of these cessions as reflecting Japan's honesty of purpose, its respect for Thai independence, and the benefits of the Japanese "co-prosperity sphere" policy. A formal treaty confirming the cessions was reported to have been signed in August.

Meanwhile Premier Songgram in a speech to Thai education officials reported by the Bangkok radio on April 6 declared the Government was "at its wit's end" as a result of the refusal of the public to cooperate in a government-sponsored program for the expansion of agricultural production and other forms of "self-improvement."

King Ananda Mahidol, still in school in Switzerland, observed his 18th birthday on September 20. He received greetings from Emperor Hirohito and other Japanese notables. On October 9 the Tokyo radio announced that Premier Songgram had assumed control of the Thai Foreign Ministry and appointed the previous incumbent Ambassador to Japan. A few days later the Thai Government recognized the Japanese-sponsored regime at Manila, which had been newly established to con-



Courtesy of Foreign Commerce Weekly

THAILAND'S TERRITORIAL ACQUISITIONS

By a treaty concluded in 1943 Japan transferred to Thailand the districts of Kentung (1) and Mongpan (2) in the Shan States and also the Unfederated Malay States of Perlis, Kedah, Kelantan, and Trengganu (5-8). In 1941 Japanese "meditation" brought about the cession to Thailand by French Indo-China of part of Laos (3) and part of Cambodia (4). The map shows the railway line Japanese military authorities were building to connect the Thai and Burmese railway networks.

solidate Japanese rule in the Philippines. See BURMA under *History*.

THEATER. A calendar year in the theater consists, especially in New York, which must be regarded as the center of the American stage and, for the duration of the war at least, the principal play-producing city of the world, of virtually halves of two distinct seasons, separated, of course, by the summer vacation period. And under normal conditions surprisingly little difference in character is perceptible as one of these seasons gives way to the next. The year 1943, however, proved an exception to this generality. Its first half disclosed an approximately equal, and therefore exceptionally good, ratio between the creditable and the discreditable and, by the same token, between the successes and the failures. But by early autumn an extraordinary dearth of worthy new plays had manifested itself and the quality of the great majority of those offered was lamentable. Yet because New York was crowded to overflowing, largely with men and women in uniform, myriads of whom were clearly intent upon theater-going, adverse critical opinion had but little effect upon many a production which ordinarily could not have withstood its chilly reception at the hands of the reviewers. Precisely as in the case of foods, if the public could not get what it really wanted, it tried to like what it could get; and to damn a piece with faint praise, or no praise at all, by no means spelt failure for it.

During the year the Theater Guild, whose recent record had not been so happy, was the recipient of Fortune's kindest smiles, directed at two of its presentations, one in the spring, the other in the fall, the former a musical comedy, the latter a Shakespearean tragedy. Though entitled *Oklahoma*, the earlier was a musical version by Oscar Hammerstein 2nd and Richard Rodgers of Lynn Riggs' folk comedy, *Green Grow the Lilacs*, a Guild offering of a dozen years back, whose locale was the old Indian Territory at the turn of the century. Inasmuch as the original name of the piece was also that of an interpolated song, it was not surprising that the Riggs theme should lend itself so admirably to this sort of revision. Couched in the Plains dialect, with a sane, romantic plot, uncommonly charming airs and lyrics, agreeable comedy features, and a novel ballet introduced with the definite object of illuminating the story, all acted, sung, and danced by a cast selected for ability and appropriateness rather than on the basis of past performances, *Oklahoma* slipped promptly and justly into the position of the year's most sought-after theatrical production. Prominently included among its players were Alfred Drake, Joan Roberts, Betty Garde, Howard da Silva, Celeste Holm, Joseph Buloff, Lee Dixon, and Ralph Riggs. The ballet feature was the creation of Agnes de Mille. Then, in mid-October, the Guild brought forth Shakespeare's *Othello* as staged by Margaret Webster and tested in a couple of the more ambitious summer theaters in the preceding year, with Paul Robeson, the distinguished Negro actor and singer, portraying the Moor of Venice and with Jose Ferrer figuring as the Iago, Uta Hagen as Desdemona, and Miss Webster herself playing Emilia. In an arrangement of the text designed to clarify the sometimes vague motivation of the tragedy, *Othello* took rank, perhaps for the first time in the history of the American stage, as an offering tremendously in demand.

Competing with these Guild products in both popularity and critical esteem was *Harriet*, an epi-

sodic biographical drama by Florence Ryerson and Colin Clements depicting the most active portion of the career of Harriet Beecher Stowe, that doughty humanitarian crusader for the abolitionist cause, starting from her marriage down to the time in 1861 when, as the famous author of *Uncle Tom's Cabin*, she was hailed by President Lincoln as "the little woman who made this great war." In the title role Helen Hayes contributed one more of her realistic and captivating portraits of noted women of history. Rhys Williams had the part of her husband, and Sydney Smith as Henry Ward Beecher was only one of many who figured interestingly and often amusingly as Harriet's numerous relatives. Another notable biographical and historical work was Sidney Kingsley's *The Patriots*, concerned primarily with the early political life of Thomas Jefferson, and presented very appropriately in the year of the Jefferson Bicentennial, at a moment when some of the chief Jeffersonian principles were once more at stake. Inevitably this drama involved also such other great personages as Washington, Madison, Monroe, and Alexander Hamilton, whose honest opposition to Jefferson's most cherished theories supplied the gist of the plot. Raymond Edward Johnson appeared with credit and dignity as Jefferson, House Jameson was a fiery Hamilton, John Souther and Judson Laire were respectively Madison and Monroe, while Madge Evans played the principal feminine part of Mr. Jefferson's daughter, Patsey.

Other creditable and popular presentations during the winter and spring were *Dark Eyes*, an amusing comedy about the invasion of a Long Island country estate by three needy Russian actresses, written as well as acted by two of them, Elena Miramova and Eugenie Leontovich, who virtually portrayed themselves; *Kiss and Tell*, by F. Hugh Herbert, likewise a comedy, concerned largely with the rising generation in a situation which would have had difficulty in passing the censor a few years back; an arresting and at times truly moving drama on the regeneration of a 12-year-old Nazi orphan, already steeped in the tenets of the Nazi philosophy, when he is expatriated to the home and care of his American uncle—*Tomorrow the World*, by James Gow and Arnould d'Usseau, with Ralph Bellamy, Shirley Booth, and two amazingly competent child actors, Skippy Homeier and Joyce Van Patten, in its chief roles; and *Three's a Family*, by Phoebe and Henry Ephron, the first, the most hilarious, and the only unobjectionable and successful one of a series of comedies on the delicate topic of wartime's skyrocketing birth rate, with Robert Burton, Ruth Weston, and particularly Ethel Owen and William Wadsworth appearing to excellent comic advantage. Less fortunate but still worthy were Janet and Philip Stevenson's *Counterattack*, a war drama adapted from a Russian source, *This Rock*, by Walter Livingstone Faust, for the principal part in which Billie Burke returned to the speaking stage, and a London importation, Mary Hayley Bell's *Men In Shadow*, dealing with occupied France. The musicals, aside from *Oklahoma*, which was in a class by itself, were the Herbert and Dorothy Fields-Cole Porter *Something for the Boys*, which, cut to the measure of its star, Ethel Merman, was the first new offering of the year and was still current at its close, and another incarnation of the *Ziegfeld Follies*, produced some three months later and likewise still running at the year's end.

During the summer the rural and suburban playhouses throughout the country functioned and

prospered, as in 1942, only in proportion to their accessibility by other means than private automobiles and, in general, on a considerably less experimental basis than usual, depending chiefly on stock presentations of recent hits. Meanwhile, in New York, the dearth of new material, more and more manifest as the new season came to life, was being evidenced by a series of revivals of such past musical successes as *The Student Prince*, *The Vagabond King*, *Blossom Time*, and *The Merry Widow*, of which the last, with Marta Eggerth and Jan Kiepura, both from the Metropolitan Opera Company, in its chief roles, was numbered among the major triumphs. Enduring favor was also accorded to another musical item entitled *Early To Bed*.

Heeding the warning inherent in the scant patronage that had fallen to the lot of most of the recent plays dealing with the war, the producers turned their attention to what was termed "escapist" drama, with the result indicated early in this record. One war item, however, did meet a cordial welcome in the early season, a program of five one-act sketches not only written but also acted by members of the armed forces, and presented under the collective title of *The Army Play by Play* in the interests of the Army Emergency Relief Fund. But another, *The Land of Fame*, by Albert and Mary Bein, concerned with the Nazi invasion and occupation of Greece, proved a swift casualty. No one else used any phase of the war for a basic topic until late November when Moss Hart's elaborate and inspiring spectacle, *Winged Victory*, made its appearance and instantly took a top position among critically approved as well as popular attractions. In this work Mr. Hart did for the Air Forces even more than Irving Berlin had previously done for the U.S. Army with his "soldier show," *This Is the Army*. He depicted in a succession of 17 scenes, some amusing, some moving and even thrilling, all vivid, the progress of a group of average American boys from a wide range of localities and various types of homes, through their induction, training, and incidental experiences to the finished product, skilled, courageous fliers engaged in mortal combat with the enemy among the islands of the Pacific—a well-deserved glorification of that branch of the Service. Here again the multitudinous parts were splendidly played by the men—and women, too—of the armed forces, for the benefit of the Relief Fund.

Another object of high approval was *One Touch of Venus*, a musical comedy by the humorists, S. J. Perelman and Ogden Nash, suggested by a story of F. Anstey's, with tuneful airs by Kurt Weill, an entertaining modernization of the ancient Pygmalion theme. For the leading roles the producer raided the screen and radio industries and captured the engaging Mary Martin, John Boles, and Kenny Baker, with droll Paula Laurence, Teddy Hart, and a dancer named Sono Osato likewise contributing to the merriment. Notable among the dramas that met with marked success despite the handicap of unenthusiastic critical receptions was a recent London melodramatic success, *The Two Mrs. Carrolls* by Martin Vale, gripping though lacking in subtlety, and distinguished in its American presentation by the uncommonly resourceful performance of Elisabeth Bergner, with Victor Jory playing opposite. In the same category was Frederick Lonsdale's first new comedy in several years, *Another Love Story*, a misnomer to the extent that its plot involved a multiplicity of uninspired romances detailed with something less than the author's most scintillating skill. Roland Young and Margaret Lindsay were its featured players.

Elmer Rice's *A New Life*, the only serious contribution to the dramatic discussion of childbirth, was rather less fortunate, notwithstanding a competent portrayal by Betty Field of a young wife experiencing maternity. Although various attempts were made to foster the revived interest in vaudeville, or at least variety shows, that had been in evidence for a year or two, the only one to achieve even moderate success was *Laugh Time*, wherein Frank Fay, Bert Wheeler, and Ethel Waters were headliners.

Rose Franken, author of the very successful *Claudia* of a couple of seasons back, came forth with a new play, *Outrageous Fortune*, of a mildly mystic nature, which achieved, among other agreeable feats, that of luring Elsie Ferguson back to the stage to head one of the season's more distinguished casts, including also Maria Ouspenskaya, Frederic Tozere, Margalo Gillmore, Adele Longmire, Margaret Hamilton, and Brent Sargent. Later, as the year was about to end, she became one of the rare playwrights to have two dramas simultaneously current in New York when her *Doctors Disagree* was also presented, a piece concerned with women surgeons. The Theater Guild meanwhile had offered a third attraction in *The Innocent Voyage*, a dramatization by Paul Osborn from Richard Hughes' novel, *A High Wind in Jamaica*, which enjoyed but a limited run under the handicap of rather intricate scenery representing no fewer than three different ships and the presence in its cast of nearly as many children as adults. It did, however, serve the excellent purpose of acquainting New York playgoers with the work of the Austrian actor, Oscar Homolka, who figured engagingly in the central role of a pirate captain, while Herbert Berghof and a very young and highly promising actress, Abby Bonime, likewise conducted themselves with conspicuous credit.

The prevalent conditions that were by now conferring financial success indiscriminately upon first-rate and second-rate offerings were largely responsible for the substantial run of the musical *What's Up*, in which Jimmy Savo was the bright particular comic, but the time was clearly ripe for a revival, or, more correctly, a rejuvenation, of *A Connecticut Yankee*, the lyric version of Mark Twain's elaborate yarn that Rodgers and Hart first put together for stage purposes in 1927. In its up-to-date form the best of the original songs were retained, while others were replaced by new ones, the last work of Lorenz Hart before his untimely death. Dick Foran, Vivienne Segal, Julie Warren, Robert Chisholm, Jere McMahon, and one Vera-Ellen, a captivating danseuse, contributed abundantly to the gaiety of this resurrection.

Even Katharine Cornell was unable to find a new play measuring up to her standard or her talents, but, as a makeshift, presented *Lovers and Friends*, a comparatively unimportant work on a commonplace theme by the English Dodie Smith, and dignified it by the resourceful acting of herself and her company, which included Raymond Massey, Henry Daniell, and Carol Goodner. Oscar Hammerstein 2nd, the librettist, accomplished a truly notable feat by transplanting the well-loved opera of *Carmen*, plot, spirit, tempo, and setting, from Spain to somewhere in the sunny South of the United States, bringing it up to the moment, under the title of *Carmen Jones*, yet leaving the Bizet music virtually intact without additions or very many subtractions, and having it both sung and acted with amazingly agreeable effect by a cast composed entirely of Negroes. And the wan-

ing year still had one further blessing to confer in John van Druten's *The Voice of the Turtle*, a slight little comedy yet one of the daintiest and most endearing to put in an appearance in recent history, with a cast of three—Margaret Sullivan, Elliott Nugent, and Audrey Christie—playing exquisitely in perfect unison. What followed this as the year faded out was merely anticlimactic: *Listen, Professor!*, a posthumous adaptation of a work by the young Russian playwright, Alexander Afinogenov, a victim of the war in Moscow, featuring Dudley Digges in a grandfather role.

Abroad, London, enjoying a welcome respite from air raids, enjoyed likewise a theater boom throughout the year, though largely under conditions to some extent comparable with those in New York which spelt patronage for many an inferior attraction. The British, however, and their guests were seemingly content with the long-run pieces continuing over from 1942 and with numerous revivals of others of proven popularity. Nevertheless, a number of the best-known playwrights contributed new dramas and several were imported from the United States. Noel Coward varied the usual procedure by producing two at the same time and having them acted alternately by the same cast, which he himself headed. Respectively entitled *Present Laughter* and *This Happy Breed*, they were hailed as his most mature and consequential work to date. J. B. Priestley was represented by a new speculative play, *They Came to a City*, strong in character delineation though deficient in action and regarded as probably the most important new item written for the theater since the war started. Its notable cast included John Clements, A. E. Matthews, and Mabel Terry-Lewis. James Bridie was reputed to have outdone himself with *Mr. Bolfray*, an ingenious and witty demonstration of the conflict between the forces of good and evil. From America meanwhile had come *Junior Miss*, which met with moderate success, and the stage version of John Steinbeck's novel, *The Moon Is Down*, which gave promise of surpassing its record on the home front.

London saw also a realistic drama on the topic of juvenile crime based on Graham Greene's novel, *Brighton Rock*, wherein chief honors went to Hermione Baddeley for her rendering of a comedy part; also *Lottie Dundass*, the first play by the novelist, Enid Bagnold, with Ann Todd acquitting herself creditably in the title role, that of a young actress so certain of her own inherent genius that she even commits a murder in order to demonstrate it; an interesting, albeit unsuccessful, new work by the notable young actor-dramatist, Peter Ustinov, aged 20, entitled *Blow Your Own Trumpet*; Roland Pertwee's *Pink String and Sealing Wax*, a melodramatic Victorian character study; and *Dark River*, by Rodney Ackland, which brought Peggy Ashcroft back to the London stage after an extended absence besides stirring up a clash of opinion regarding its merits. There was, in addition, a fairly tedious dramatic version of Tolstoi's massive *War and Peace*, while further cordially welcomed visitors from America included the lurid musical, *Panama Hattie*, presented with an almost completely British cast, Irving Berlin's military melange, *This Is the Army*, with the author-producer himself acting in the play, Maxwell Anderson's *The Eve of St. Mark*, and, finally, Robert E. Sherwood's *There Shall Be No Night* in revised form with its setting and its application transferred for obvious reasons from Finland to equally heroic Greece. For this event Alfred Lunt and Lynn Fontanne crossed the Atlantic to assume

their original characterizations. As the year ended, J. B. Priestley contributed one more impressive item related to the war, *Desert Highway*, wherein, by his own route, he arrived at much the same conclusion, as affecting the British, that Mr. Sherwood had already attributed, respectively, to Finns and Greeks.

In Paris, as in other Nazi-occupied centers, with all incentive for new work or originality strangled (see FRENCH LITERATURE), activity in the theater was negligible, while Berlin, for extended periods under more or less constant bombardment from the air, discovered what it meant to be left without time, thought, or inclination for the drama. In Russia, to a large degree, plays were produced primarily for the entertainment of the fighting men, and taken to them at the battle fronts when opportunity permitted. One new work, *The Deathless*, by Alexei Arbugov and Alexander Gladiov, dealing unpretentiously and humanly with earlier phases of the German invasion, contained one character, a Yankee reporter who espouses the Russian cause, so well liked that the piece was accepted as adding materially to the friendliness of Soviet-American relations. See the articles on LITERATURE.

For published plays, see LITERATURE, BRITISH AND AMERICAN, under *Drama*; articles on foreign literature. For Camp Shows, see UNITED SERVICE ORGANIZATIONS. For Ice Shows, see SKATING. See also NEGROES; PULITZER PRIZES; RADIO PROGRAMS. RALPH W. CAREY.

THERMO-CAST. See PLASTICS.

THIRD INTERNATIONAL. See CHINA and UNION OF SOVIET SOCIALIST REPUBLICS, under *History*.

THOMAS JEFFERSON NATIONAL MEMORIAL. See NATIONAL PARKS and MONUMENTS.

THOMISM. See PHILOSOPHY.

THURINGIA. See GERMANY under *Area and Population*.

TIBET. A dependency of China in central Asia. Area, 463,000 square miles; population variously estimated at from 700,000 to 6,000,000. Capital, Lhasa, 50,000 inhabitants. Lamaism, a development of Mahayana Buddhism, is the religion of the people. Chief occupations: agriculture, stock raising, wool spinning, and knitting. The principal minerals are gold, borax, and salt. There is a factory for the manufacture of army equipment, uniforms, coins, and paper money. Trade is carried on with China and India.

Civil and religious authority is vested in the Dalai Lama, acting through a prime minister appointed from among the principal Tibetan lamas. The latter is assisted by a grand council of four members. The 14th Dalai Lama is a Chinese peasant boy selected in 1939 as the reincarnation of the 13th Dalai Lama who died in 1933. Enthroned Feb. 22, 1940 (see YEAR BOOK for 1940), he took the name of Jampel Ngawang Lobsang Yishey Tenzing Gyatso. During his minority, supreme power remains in the hands of the regent who assumed control upon the death of the 13th Dalai Lama.

History. After many months of negotiation with Chinese and British authorities, the Tibetan Government in May, 1943, departed from its traditional closed-door policy to the extent of agreeing to permit the transportation of nonmilitary supplies from India to China across Tibet. Under the agreement, the goods were to be carried by Tibetan transport contractors under the supervision of the Tibetan Government. The quantity of goods car-

ried was limited by the fact that pack animals offered the only means of transport and that both caravan routes to China—from Kalimpong in northern Bengal and Gangtok in Sikkim State—averaged some 12,000 feet in altitude.

TILE. See **BUILDING MATERIALS.**

TIMOR, Portuguese. A Portuguese possession (occupied by the Japanese during February, 1942) in the Malay Archipelago, comprising the eastern part of the island of Timor together with the territory of Ambeno and islands of Pulo Cambing and Pulo Jako. Total area, 7,330 square miles. Population (1940 estimate), 474,363. Capital, Dili (Dilly or Dilli), with about 3,000 inhabitants. The chief export products are copra, coffee, sandalwood, sandalroot, and wax. Estimated public revenue and expenditure for 1942 balanced at 9,230,194 escudos (nominal value of the escudo was \$0.0412, Nov. 8, 1943). Public debt (Dec. 31, 1941), 31,279,164 escudos.

Portuguese Timor remained a zone of military operations throughout 1943. Japanese naval and air bases on the island were repeatedly attacked by Allied bombers of Gen. Douglas MacArthur's Southwestern Pacific command.

TIN. Continued severe restrictions upon use, imports from Bolivia and Belgian Congo, and reclamation of tin can coatings combined to provide American industry with a lean but sustaining diet of tin during 1943.

At the end of the year tin was listed as the third most critical of essential metals by the War Production Board. With 70 per cent of prewar production sources still in enemy hands, there was little immediate hope that consumption on the vast prewar scale could be resumed, however. Production of tinplate from which "tin cans" are made, was scheduled for approximately the same level in 1944 as in 1943, when output was approximately 2,500,000 tons.

The electrolytic process for tinplating steel for food containers was used for less than 15 per cent of 1943 tinplate output. Distribution of shipments from tinplate mills during the first six months of 1943 was approximately as follows: hot dipped tinplate, 19,750,000 base boxes; electrolytic tinplate, 2,600,000 base boxes; black plate, 1,715,000 base boxes; pretreated or chemically bonded black plate, 1,005,000 base boxes; ternes, 1,330,000 base boxes; total, 26,400,000 base boxes. (In order to convert to tonnage, base boxes may be divided by 21.) Production for the final six months of the year continued on a slightly reduced scale.

The \$6,300,000 Longhorn tin smelter, erected with government funds at Texas City, Tex., in order to smelt Bolivian ores for United States consumption, and for British needs in case Liverpool were bombed, did not reach capacity operation. The Liverpool smelters continued in operation, making full use of the Texas smelter unnecessary, although it could have produced more than 50,000 long tons of refined tin annually.

Production of the Belgian Congo, which is very substantial, is shipped to the United States. This production supposedly was larger in 1943 than in previous years. Some tin is refined in the Congo at Elizabethville. Nigerian production, also believed to have increased, is shipped directly to England, thus affording another United Nations source.

Tin cans were collected on so large a scale from American homes, restaurants, and institutions, as to become almost an American tradition. While the to-

tal amount of tin recovered from these cans by detinning plants was not large compared to overall requirements, the tin recovered is 99.85 to 99.95 per cent pure and is available for war uses. Some tin cans collected were routed to shredding plants to be prepared for shipment to the copper industry which uses them for precipitating copper bearing waters.

Rumors that tin had been shipped from Japanese wartime possessions to the United States by way of Russia were denied in their entirety by responsible government officials. It was pointed out that the Metals Reserve Co. is the sole agency empowered to buy abroad for this country and that their records showed no such transaction.

Projects to mine and mill veinlet deposits of tin ore near Riverside, Calif., and Cima, Calif., failed to produce more than minute amounts.

It is estimated that brass and bronze exceeded tinplate in 1943 as the leading tin use, taking approximately 35 per cent of the total consumed. Tinplate, it is believed, accounted for about 30 per cent, babbitt 9 per cent, and solder 16 per cent, with the remainder distributed among minor uses. See **LABOR CONDITIONS** under *Labor Movements*; **WAR PRODUCTION BOARD** under *Salvage*.

CHARLES T. POST.

TNT. See **CHEMISTRY** under *Explosives*.

TOBACCO. The production of all types of tobacco in the United States in 1943 was estimated by the U.S. Department of Agriculture at 1,403,275,000 lb. compared with the 1,408,717,000 lb. in 1942 and the 1932-41 average of 1,349,896,000 lb. The harvested crop totaled 1,461,800 acres compared with 1,377,200 acres in 1942, while the 1943 average yield per acre was 960 lb., compared with 1,023 lb. in 1942. The season average price received by farmers in 1942 was 36.9¢ per pound and the value of production was \$519,478,000.

The accompanying table lists the leading tobacco States for 1943. See **STATE LEGISLATION** under *Taxation and Finance*.

State	Value	Acres Harvested	Production (lbs.)
N.C.....	\$222,300,000	587,600,000	553,680,000
Ky.....	137,118,000	341,400,000	328,811,000
Va.....	43,520,000	116,600,000	106,878,000
S.C.....	33,999,000	92,000,000	87,400,000
Tenn.....	33,509,000	95,000,000	93,545,000
Ga.....	25,492,000	71,300,000	65,004,000
Conn.....	14,817,000	14,300,000	19,518,000
Md.....	10,562,000	32,600,000	17,604,000
Fla.....	8,745,000	16,300,000	14,810,000
Ohio.....	7,277,000	21,000,000	21,067,000
Penn.....	6,765,000	31,700,000	39,715,000
Wis.....	6,747,000	17,800,000	27,368,000
Mass.....	4,366,000	5,000,000	8,185,000
Ind.....	4,311,000	8,900,000	9,505,000
Mo.....	2,640,000	5,600,000	5,740,000
W.Va.....	1,139,000	2,800,000	2,450,000

The production by types in 1943 was estimated as follows: flue-cured 790,878,000 lb.; fire-cured 68,523,000 lb.; air-cured light—Burley 385,286,000 lb. and Southern Maryland 17,604,000 lb.; air-cured dark 32,422,000 lb.; and cigar types 108,312,000 lb., including filler 47,645,000 lb.; binder 50,840,000 lb.; and wrapper 9,827,000 lb. The production of cigar tobacco is about 9 per cent less than for 1942, due to decreases of 11 per cent in the filler class and 9 per cent in the binder class.

Internal revenue taxes collected on tobacco products by the United States for the fiscal year ended June 30, 1943, as reported by the U.S. Bureau of Internal Revenue, totaled \$923,857,283, distributed as follows: large cigars \$23,075,077, small

cigars \$97,317, large cigarettes \$29,600, small cigarettes \$835,230,743, snuff of all descriptions \$7,543,283, and chewing and smoking tobacco \$47,849,119. In this connection was collected also \$1,472,325 on cigarette papers and tubes, \$3,566 as leaf dealer penalties, etc., and \$8,556,250 on cigarette and cigar floor tax.

TOGO, French. The part of Togo mandated to France by the League of Nations. Area, 21,893 square miles. Population (1938), 780,497. Capital: Lomé (14,380 inhabitants). The main products are cocoa, palm oil, copra, coffee, and cotton. Trade (1939): imports 91,644,000 francs; exports 74,227,000 francs (franc averaged 0.0251 in 1939). Budget (1939): 50,534,000 francs; in addition, the railway budget was 12,889,000 francs. Railways (1940): 242 miles. Shipping (1938): 386 ships cleared the ports of Lomé and Anecho.

TOGOLAND. The area of Togo which was confirmed as a British mandate by the League of Nations and attached to the British Gold Coast for administrative purposes. Area, 13,041 square miles. Population (June 30, 1940), 391,473. The chief products are palm oil, cacao, kola nuts, coffee, and cotton. Statistics of trade and finance are included in the general totals for the Gold Coast. Administrator, the Governor of the Gold Coast.

TOKELAU (Union Islands). A group of islands (Fakaofu, Nukunono, Atafu) in the Pacific (8° to 10° S. and 171° to 173° W.), formerly part of the Gilbert and Ellice Islands colony, transferred to the jurisdiction of New Zealand on Feb. 11, 1926. Area, 4 square miles. Estimated population (June, 1942), 1,364. There was a wireless station on each of the three islands. The government was under supervision of the administrator of Western Samoa.

TONGA (Friendly Islands). A native kingdom and British protectorate in the South Pacific, east of Fiji. It comprises 150 islands and islets forming three main groups called respectively Tongatabu, Haapai, and Vavau, and includes the outlying islands of Niuafoou, Tafahi, and Niuaotubutu. Total area, about 250 square miles. Population in 1939, 34,130 (32,862 Tongans, 400 whites, 441 half-castes, and 427 others), of whom 15,754 inhabit Tongatabu. The natives are Christians. Capital, Nukualofa. Education (1940): 117 primary schools and 6,714 students; Tonga College had 196 students enrolled. A large United States task force arrived during the spring of 1942 and built an airbase on Tongatabu.

Copra, bananas, citrus fruits, breadfruit, taro, yams, and fish are the chief products. Trade (1940): imports £A76,360; exports £A62,275 (copra 7,316 tons valued at £A43,889 was the main export item). Finance (1940-41): £A60,820; expenditure £A72,211 (official exchange rate for the £A during 1940 and 1941 was \$3.228). Queen Salote Tubou succeeded to the throne Apr. 12, 1918. The Legislative Assembly consists of 22 members (7 nobles elected by their peers, 7 representatives of the people, 7 members of the Cabinet, and the Speaker). Elections are held triennially. A British Agent, responsible to the British High Commissioner for the Western Pacific, is assigned to the Court.

U.S. naval forces landed in Tonga in the spring of 1942. With the cooperation of British and Tongan authorities, they constructed an air base and other installations for defense and counter-offense against the Japanese.

TORPEDO CRAFT. See NAVAL PROGRESS under *Small Torpedo Craft*.

TOTALITARIANISM. See ARGENTINA, GERMANY, JAPAN, ITALY, SPAIN, and UNION OF SOVIET SOCIALIST REPUBLICS, under *History*.

TRACK AND FIELD ATHLETICS. When Gunder Haegg of Sweden broke seven world distance records in 1942 some track fans on this side of the Atlantic were inclined to doubt the quality of the stop watches being used abroad. But in 1943, Gunder the Wonder visited this country for a series of races and convinced even the Doubting Thomases that he deserved billing as the greatest middle distance runner the world had ever seen.

After a hazardous tanker trip across the ocean the Swift Swede went on a cross-country tour that called for eight appearances. When the trip was over Gunder had won seven races, set three American records, and clearly earned rating as "athlete of the year." The only event he failed to win was a two-mile test in which the victor was allowed a handicap of 440 yards. Nevertheless, Gunder, finishing second, established a new mark for the race.

However, while Haegg was over here, his countryman, Arne Andersson, who could not make the trip, found running in Sweden even more productive. For while Gunder was making new friends here Arne was busy making new records over there. What's more, it was a pair of outdoor standards belonging to Haegg that Andersson shattered. Arne lowered the mile record from 4:04.6 to 4:02.6 and the 1,500-meter time from 3:45.8 to 3:45.

The feats of Andersson and Haegg added spice to a campaign that saw interest in the sport maintained at a high level. Of course Andersson's new records were most notable, but rated not far behind was the 8:51 timing in a two-mile indoor event at Cleveland by that greatest board-floor middle distance man of all time, little Greg Rice. The former Notre Dame champion was one of the many track and field stars who entered the armed services.

For sustained interest, however, nothing that happened in the sport all year compared with Haegg's American showings. The Flying Fireman made his United States debut at Randalls Island, where he easily defeated Rice in a 5,000-meter test that carried with it the National A.A.U. championship and ended a 65-race winning streak for Rice. Haegg's time of 14:48.5 was slow, but his flawless form at once became a topic of conversation for track experts.

After New York, Haegg went to Chicago and there led home Gil Dodds in 9:02.8 for two miles. Olympic Stadium in Los Angeles was Gunder's next stop and there he ran two miles in 8:53.8, fastest time for the distance ever fashioned outdoors in the United States. At San Francisco, Haegg switched to the mile and won in 4:12.3, then a week later at Boston he really went to town, reeling off a mile in 4:05.3, to set a new American outdoor standard. En route he was caught in 3:47.8 for 1,500 meters, also the fastest ever in this country. In the Boston race, Dodds covered the mile in 4:06.5 (also under Glenn Cunningham's American standard of 4:06.7) and Bill Hulse, former N.Y.U. star, was caught in 4:07.8.

The Baldwin-Wallace track at Berea, Ohio, was the scene of Haegg's next triumph, the visiting ace again conquering Hulse and Dodds in 4:05.4 as Hulse, surprising the track world, was timed in 4:06, a tenth of a second faster than Dodds.

Haegg then moved to Cincinnati and produced an 8:51.3 two miles, bettering his record achievement at Los Angeles. The tour's finale brought Haegg, Dodds, and Hulse back to Randalls Island in a one-mile classic that resulted in a thrilling 4:06.9 victory over Dodds and Hulse, the Swede overcoming an accidental brush by Dodds that almost toppled Gunder off the track. Haegg's tour brought in nearly \$150,000 for the Army Air Forces Aid Society.

Haegg's visit and the participation of service men in most of the meets helped maintain interest in the sport. All the big competitions were held and despite a paucity of world records the year did produce Cornelius Warner's greatest pole vault, a leap indoors of 15 feet 8½ inches, Rice's 8:51 mark for two miles indoors, and a number of assorted marks. The national indoor mile laurels were won by Frank Dixon while Dodds took the outdoor crown at 1,500 meters. Rice, of course, kept his two-mile title. The sprinting of Harold Davis and Harvey Kelsey, Bill Cummins's hurdling, and Cliff Bourland's unbeaten 440 racing were other highlights.

New York University swept the I.C.4-A meets, indoors and out, and took the National A.A.U. indoors championship to become the first college team to ever gain that crown. The New York A.C. retained the A.A.U. outdoor title. Southern California won the N.C.A.A. outdoor games for the ninth straight time and Michigan captured the Big Ten outdoor and indoor honors.

The Polish Olympic Women's A.C. of Cleveland annexed the women's national championship as the versatile Stella Walsh won two sprints and the broad jump to pace her team in victory.

THOMAS V. HANEY.

TRADE, Foreign. Preliminary returns for United States foreign trade during the calendar year 1943 showed record-breaking exports and a high level of imports. Including lend-lease shipments, exports were valued at \$12,716,902,000, a figure 58 per cent higher than in 1942, 143 per cent higher than in

1929, and 54 per cent above the previous peak year of 1920. Imports, totaling \$3,364,809,000, were the highest in any year since 1929.

As indicated in Table I, U.S. exports other than lend-lease shipments sustained a sharp setback in 1942 coincident with the tremendous expansion of lend-lease trade. Cash exports totaled \$4,406,151,000 during the last ten months of 1941 but dropped to \$2,179,042,000 in the first ten months of 1943. At the end of 1943, they were running at about the same rate as in the years 1934-36 inclusive. On the other hand, lend-lease shipments were about 80 per cent of all U.S. exports by the fall of 1943, as compared with less than 1 per cent in March, 1941, the first month the Lend-Lease Act became operative. Lend-lease goods accounted for 78 per cent of all U.S. exports during the first ten months of 1943.

General imports in 1943 amounted to \$3,364,809,000, the highest total since 1929. They were 23 per cent greater than for 1942 and 51 per cent above the annual average imports for the decade 1932-41. However the 1943 imports were 36 per cent below the \$5,278,481,000 total registered for 1920. The value of general imports for the full year 1943 substantially increased compared with preceding years, but the December total of \$274,256,000 was the smallest since April and was 16 per cent less than the peak 1943 monthly import total of October. See Table II.

II. U.S. IMPORTS: 1942 AND 1943
(In thousands of dollars, adjusted to nearest thousands)

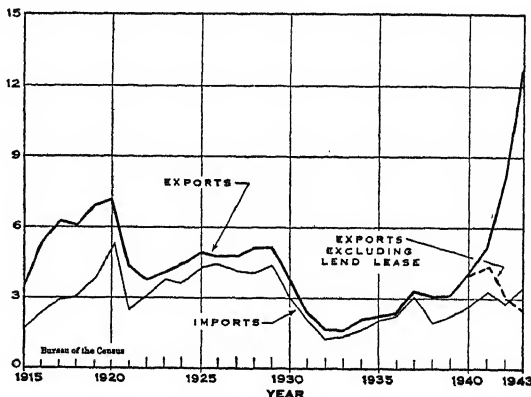
Month	General imports (arrivals)		Imports for consumption	
	1942	1943	1942	1943
January.....	\$ 253,546	\$ 228,248	\$ 256,046	\$ 245,580
February.....	253,609	233,872	239,592	244,910
March.....	272,111	249,234	252,029	263,988
April.....	234,870	257,569	223,604	267,431
May.....	190,800	280,941	186,580	285,058
June.....	215,290	295,225	200,226	287,578
July.....	213,362	300,088	209,248	294,374
August.....	186,333	315,336	184,820	305,714
September....	196,061	284,936	196,785	283,775
October.....	199,694	328,572	223,409	316,711
November.....	168,037	316,532	186,942	301,427
December.....	358,301	274,256	407,144	271,047
Total.....	2,742,014	3,364,809	2,766,425	3,367,573

The net merchandise export balance for December, 1943, amounted to \$974,333,000. This brought the net export balance for the year to a new high of \$9,352,093,000, or 77 per cent above the previous peak of \$5,293,402,000 in 1942. Due to the wartime rise in prices, the figures showing the value of trade do not accurately reflect changes in the physical volume of trade.

I. U.S. EXPORTS: 1942 AND 1943
(In thousands of dollars, adjusted to nearest thousand)

Period	Merchandise	Total exports*	Lend-lease exports	% Lend-lease exports to total exports
1942				
January.....	\$ 475,205	\$ 481,463	\$ 175,000	36.4
February.....	476,327	479,933	194,000	40.4
March.....	621,573	627,603	329,000	52.4
April.....	709,076	716,774	425,000	59.3
May.....	529,243	535,194	306,000	57.2
June.....	642,830	648,222	405,000	62.5
July.....	645,009	649,926	424,000	65.2
August.....	696,244	703,096	434,000	61.8
September.....	725,878	731,995	472,000	64.5
October.....	793,718	801,479	562,000	70.1
November.....	779,852	786,792	561,000	71.3
December.....	864,584	872,879	608,000	69.7
Total.....	7,959,539	8,035,416	4,895,000	60.9
1943				
January.....	\$ 721,960	\$ 730,133	\$ 535,000	73.3
February.....	710,464	718,940	529,000	73.6
March.....	973,733	988,228	777,000	78.6
April.....	970,287	979,837	775,000	79.1
May.....	1,075,835	1,084,514	848,000	78.1
June.....	995,349	1,001,597	791,000	79.0
July.....	1,254,256	1,262,057	1,021,000	80.9
August.....	1,192,672	1,203,710	989,000	82.2
September.....	1,216,313	1,233,027	1,001,000	81.2
October.....	1,184,984	1,192,709	942,000	79.0
November.....	1,061,827	1,073,561	.....	.....
December.....	1,236,264	1,248,589	.....	.....
Total.....	12,593,944	12,716,902	10,100,000	...

* Including reexports. *Partly estimated.



U.S. Foreign Trade, 1915-1943, in Billions of Dollars

III. FOREIGN TRADE OF THE UNITED STATES, BY SELECTED AREAS: 1941 AND 1942
[Value in millions of dollars]

Country and region	Total exports, including reexports ^a		Cash exports		General imports		Excess of cash exports over imports		% cash exports of total exports	
	1941	1942	1941	1942	1941	1942	1941	1942	1941	1942
Total.....	5,147	7,823	4,414	3,151	3,345	2,742	+1,069	+409	85.3	40.3
United Kingdom ^b	1,642	2,362	1,075	495	139	135	+936	+359	65.5	20.9
Canada ^c	1,019	1,367	1,007	1,257	575	735	+432	+522	98.8	92.0
U.S.S.R.	108	1,379	107	62	30	25	+77	+37	99.5	4.5
Near East and Africa ^d	535	963	439	275	210	250	+229	+25	82.1	28.6
Western Asia.....	30	159	28	38	47	45	-20	-7	91.7	24.0
Egypt (including Anglo-Egyptian Sudan).....	250	583	161	137	12	22	+148	+115	64.4	23.5
Union of South Africa.....	187	100	187	48	66	96	+120	-48	99.8	48.0
Far East (excluding Japan).....	659	880	606	228	1,121	520	-515	-292	92.0	25.9
China.....	95	75	73	12	87	15	-15	-3	76.1	15.9
India and dependencies.....	98	378	90	91	132	105	-42	-14	91.3	24.0
Australia.....	91	286	78	75	139	196	-61	-122	85.7	26.1
New Zealand.....	31	76	29	13	15	23	+14	-10	95.1	16.9
Japan.....	60	....	60	....	78	....	-18	....	100.0	100.0
Continental Europe (excluding U.S.S.R.).....	90	35	85	35	106	55	-21	-19	95.0	99.1
Latin America.....	1,035	836	1,034	799	1,086	1,022	-51	-223	99.9	95.5
20 Republics.....	902	708	902	683	1,008	979	-106	-297	99.9	96.5
British Empire and Egypt.....	3,479	5,288	2,778	2,176	1,512	1,432	+1,266	+744	79.9	41.1

^a Includes Lend-Lease shipments but excludes shipments to U.S. armed forces abroad. ^b Includes Eire. ^c Includes Newfoundland, Labrador, St. Pierre and Miquelon, Greenland, and Iceland. ^d Includes islands in the Mediterranean.

As indicated in Table III, the geographical distribution of U.S. exports and imports changed materially in 1942 as compared with 1941. (Comparative statistics for 1943 were not available in time for inclusion in this article.) The customary heavy shipments of consumer goods dropped off sharply in many lines in 1942 as production was curtailed and plants shifted to war orders. However cash exports of such essential products as coal, steel, industrial machinery, petroleum products, chemicals, paper, textiles, foodstuffs, and also strictly military equipment continued on a large scale.

The export trade in 1942 tended increasingly to concentrate upon British Empire countries and the American republics, in line with the trend since the outbreak of war in 1939. Lend-lease shipments accounted for a growing proportion of total U.S. shipments to the United Kingdom while cash sales to Canada increased. About one-fifth of the cash exports to Canada represented military items purchased outright. The Latin American republics and the European colonies in that area received about 25 per cent of the total cash exports of the United States in 1942, compared with 18 per cent in 1936-38 and 20 per cent in 1939-41. However cash exports to Latin America in 1942 were 23 per cent less in value than in 1941.

During the first nine months of 1943, general imports of merchandise into the United States from the 20 Latin American republics exceeded total exports to them by \$371,000,000. The net U.S. import balance for the same period of 1942 was \$221,000,000. The most significant import balances for the January-September, 1943, period were noted in U.S. trade with Cuba, Chile, Argentina, Brazil, Colombia, and Uruguay. U.S. exports to Panama and Venezuela exceeded imports from those countries during the same period.

For the foreign commerce of countries other than the United States, see the separate article on each country, under *Foreign Trade*. Also see AGRICULTURE; BANKS AND BANKING; BUSINESS REVIEW; CUSTOMS, BUREAU OF; ECONOMIC WARFARE, BOARD OF; EXPORT-IMPORT BANK; TARIFF COMMISSION.

TRADE AGREEMENTS, U.S. See ICELAND and IRAN, under *History*; UNITED STATES under *Enactments*. **TRADE PUBLICATIONS.** See MAGAZINES.

TRAFFIC. Compare TRANSPORTATION. For *Traffic Problems*, see RAPID TRANSIT; ROADS AND STREETS; compare ACCIDENTS.

TRAILERS. See NATIONAL HOUSING AGENCY.

TRAINING, Bureau of. See WAR MANPOWER COMMISSION.

TRAINING FILMS. See MOTION PICTURES, text and illustrations; also, EDUCATION, U.S. OFFICE OF; ILLUMINATION; MINES, BUREAU OF; PHOTOGRAPHY. For the Training Aids Division, U.S. Army, and the Training Film Branch, U.S. Navy, see PHOTOGRAPHY.

TRANSPORTATION. See AERONAUTICS; BUSINESS REVIEW; COORDINATOR OF INTER-AMERICAN AFFAIRS; DEFENSE TRANSPORTATION, OFFICE OF; FOOD INDUSTRY; LIVING COSTS; MOTOR VEHICLES; PETROLEUM ADMINISTRATION FOR WAR; PORTS AND HARBORS; RAILWAYS; RAPID TRANSIT; ROADS AND STREETS; SHIPPING; WATERWAYS; foreign countries under *Transportation*.

TRANSPORT PLANES. See AERONAUTICS under *American Transports*.

TRANS-JORDAN. An Arab territory in Asia Minor, bounded by Syria, Iraq, Saudi Arabia, and Palestine. With Palestine, it was mandated to Great Britain by the League of Nations, Sept. 29, 1923. Area, 34,740 square miles. Estimated population, about 800,000 (260,000 Arab Moslems, 30,000 Arab Christians, 10,000 Circassians and others). Chief towns: Amman (capital), Es-Salt. Arabic is the official language. Education (1938-39): 191 schools and 13,854 pupils.

Defense. The defense force in 1941 included Royal Air Force units based at Amman and Maán; the Trans-Jordan Frontier Force of 700 natives with British officers; and an Arab Legion of 47 officers and 1,577 men, led by Col. John B. Glubb, an Englishman. Local Arab tribal levies were available in time of emergency.

Production, etc. East of the Hejaz Railway the country is largely desert, but fertile land suitable for agriculture lies to the west. Stock raising and primitive agriculture are the principal occupations. Record crops of 200,000 tons of wheat and 100,000 tons of barley were reported for 1942. Some tobacco is grown. Phosphate deposits have been developed and potash is recovered from the Dead Sea. The country's limited trade is mainly with Palestine and Iraq. Roads (1938): 1,250 miles. The Hejaz Railway, running south from Damascus across Trans-Jordan, was open to traffic only as far as Maán in 1941. British reports indicated that in

1942 a military railway was under construction from Maán to the port of Aqaba on the Red Sea. Air lines from Cairo, Egypt, and Lydda, Palestine, to Baghdad cross Trans-Jordan. Finance (1939-40): £P513,971, including a grant-in-aid from the British Government; expenditure £P510,293; public debt (Dec. 31, 1939) £P155,107 (£P was worth \$4.035 in 1939 and 1940).

Government. Conquered from the Ottoman Empire by the British in World War I, Trans-Jordan was placed under the rule of the Hashimite prince, Emir Abdullah ibn Hussein in April, 1921. He is assisted by a Council of Ministers, established Aug. 6, 1939. There is a Legislative Assembly of 16 elected and 6 ex-officio members. A treaty recognizing Trans-Jordan's right to an independent government but placing it under British protection was signed Feb. 20, 1928. The British High Commissioner for Palestine is also High Commissioner for Trans-Jordan. He is represented at Amman by a British Resident (A. S. Kirkbride, app. Feb. 16, 1939).

History. Emir Abdullah lent his active support to the movement for federation of the Arab states during 1943. He offered his services as ruler of the proposed federation, and in September sent his Premier, Tewfik el Hada, to Cairo to discuss federation with the Egyptian Premier. See EGYPT under *History*.

TRANSVAAL. See SOUTH AFRICA, UNION OF.
TRANSYLVANIA. See HUNGARY and RUMANIA under *History*.

TREASON CASES. See LAW under *War Decisions*; BRAZIL, GERMANY, GREAT BRITAIN, ITALY, SOUTH AFRICA, and SWITZERLAND, under *History*.

TREASURY, U.S. Department of the. A Department of the U.S. Government which was composed in 1943 of the following principal branches.

- Bureau of the Comptroller of the Currency
- Bureau of Customs
- Bureau of Engraving and Printing
- Bureau of Internal Revenue
- Bureau of the Mint
- Bureau of Narcotics (see NARCOTIC DRUGS CONTROL)
- Committee on Practice
- Division of Monetary Research
- Division of Personnel
- Division of Research and Statistics
- Division of Tax Research
- Legal Division
- Office of the Chief Clerk
- Fiscal Service
- War Savings Staff
- Foreign Funds Control
- Office of Superintendent of Treasury Buildings
- Procurement Division
- Secret Service

The Secretary of the Treasury in 1943 was Henry W. Morgenthau, Jr. See the separate listing of important bureaus; BANKS and BANKING; FINANCIAL REVIEW; PUBLIC FINANCE; TAXATION.

TREASURY (MONO) ISLANDS. See BRITISH SOLOMON ISLANDS; WORLD WAR under *The War in the Pacific*.

TRENGGANU. See BRITISH MALAYA; THAILAND.

TRINIDAD AND TOBAGO. A united British colony near the coast of Venezuela, comprising the islands of Trinidad (1,862 sq. mi.), Tobago (116 sq. mi.), and adjacent islands. Total area, 1,980 square miles. Total population (Jan. 1, 1942), 506,316. Most of the inhabitants are West Indian natives of African descent. The white population comprises English, French, Spanish, and Portuguese. In addition, there are East Indians (estimated at 170,396), and a few Chinese. Vital statistics

(1941): 16,494 births, 7,906 deaths, and 3,563 marriages. Chief towns: (of Trinidad) Port of Spain (capital), 97,531 inhabitants, San Fernando 28,652, Arima 16,000, Princes Town 5,580; (of Tobago) Scarborough 1,515, Roxborough, Plymouth. Education (1941): 292 primary and secondary schools. Queens Royal College provides higher education.

U.S. Bases. Defense bases were leased to the United States in 1941 for a period of 99 years, under the authority of United States Bases Agreement concluded between the Governments of the United Kingdom and the United States of America, and the Trinidad-United States Bases Lease of Apr. 22, 1941 (see 1942 YEAR BOOK, p. 662, col. 2, for the location of these bases).

Production and Trade. Principal products: petroleum (2,988,000 metric tons, 1941), asphalt, cocoa (5,000 tons, 1941-42), sugar (65,000 tons, 1943), rum, molasses, rice, coconuts, coffee, timber, grapefruit, and bananas. There are deposits of coal, iron, graphite, gold, and gypsum. Natural asphalt is obtained from the pitch lake at La Brea. Trade (1941): imports were valued at \$57,485,563; exports \$47,295,874 (sugar, asphalt, and cocoa are the chief export products).

Communications. In 1942 there were 1,849 miles of roads, 123 miles of government railway, 118 miles of telegraph line, and 22,040 miles of telephone line. There are three government wireless stations, and cable communications with North America, Great Britain, and other parts of the world. Air services were in operation to and from the United States, South America, Europe, and the West Indies. During 1943 a regular weekly air service from Trinidad to Grenada was inaugurated.

Finance. Revenue for 1943 was estimated at almost \$21,000,000 (\$22,000,000 in 1942) and expenditure at slightly less. Public debt, Dec. 31, 1941, \$22,574,040.

Government. The colony is governed under a reformed constitution which went into effect in 1941. A governor, assisted by an executive council, heads the administration. As now constituted the legislative council consists of the Governor as president (with a casting vote in case of a tie), 3 official members, and 15 unofficial members (6 nominated by the Governor and 9 elected by the voters). Governor, Capt. Sir Bede Clifford (app. Mar. 25, 1942).

History. The President of the United States made a short stop in Trinidad at the end of January, 1943, during his flight north from Brazil, and inspected United States army and naval installations on the island.

TRIPOLITANIA. See LIBYA.

TROBIAND ISLANDS. See PAPUA.

TROOP CARRIER COMMAND. See AERONAUTICS.

TROOPS-IN-TRANSIT SERVICE. See UNITED SERVICE ORGANIZATIONS.

TROTSKY CASE. See MEXICO under *History*.

TRUCIAL OMAN. See ARABIA under *Oman, Trucial*.

TRUCK CROPS. See HORTICULTURE.

TRUK. The chief naval base of Japan in the west central Pacific, comprising a cluster of islands (151° 22' E. and 6° 57' N.) in a lagoon surrounded by coral reefs (32 miles across from east to west), in the eastern Caroline group of the mandated Japanese Pacific Islands (q.v.). Area, 51 square miles. Civil population (1938), 17,133. There are 245 islands in all, the chief being Dublon (3 miles long), Fefan, Moen, Tol, Udot, and Uman. The islands, of volcanic and coral formation, are for the

most part high, and offer good protection and safe anchorages for ships. Only four (North, Northeast, Otta, and Piaanu) of the 20 passes through the reefs are navigable.

TUAMOTU ISLANDS. See FRENCH OCEANIA.

TUBERCULOSIS CONTROL. See PUBLIC HEALTH SERVICE.

TUNGSTEN. Mounting domestic and Western hemisphere production and continued severe War Production Board restrictions upon use combined in 1943 to take tungsten out of the shortage classification in which it had remained during the first year of the war.

The Yellow Pine mine in the wilderness of central Idaho, operated by the Bradley Mining Co., fulfilled the hope that it would become the richest and greatest scheelite (CaWO_4) deposit ever known, and undoubtedly accounted for more than one-third of domestic production. This mine also was the country's largest producer of antimony, the metal for which it was being developed when core drilling conducted by the U.S. Bureau of Mines and the U.S. Geological Survey (qq.v.) revealed the presence of tungsten ore. Continued successful application by the Nevada-Massachusetts Co. of its concentration process, which had reached maturity in 1941 and 1942, enabled it to produce substantially from northern Nevada ores. United States Vanadium Corp., which in 1941 had solved the problem of extracting tungsten from a large low-grade deposit of refractory ore occurring high in the Sierra-Nevada mountains of California, continued large-scale production from this deposit. This company also completed and commenced operation as agents of Metals Reserve Co. of a chemical treatment plant at Salt Lake City, Utah, to produce high grade concentrates. Low grade scheelite deposits in northern Nevada were the source of considerable tonnages milled by Getchell Mines, Inc. Many smaller deposits, principally in the southern Sierra-Nevada mountains of California, in Nevada, and individual mines in western Arizona, southern Idaho, Utah, and Colorado, together rounded out most of the balance of domestic production.

Many smaller mines of immediately preceding years, a result of prospecting encouraged by the high price for tungsten at the beginning of the war and the hope that tungsten would shoot up to \$40 or \$60 per short ton unit as in the last war, were abandoned in the face of high operating costs and a stabilized price structure. The ultraviolet lamp, under which tungsten reveals its presence by a fluorescent glow, continued an invaluable aid to prospecting. In view of the limited reserves of labor and equipment available, the Federal government discouraged development of deposits analyzing less than 0.5 per cent WO_3 unless the ore could be mined and milled at unusually low cost.

No production statistics are available because of the war, but it may be assumed that American requirements were met approximately one-half from domestic mines, and one-half by imports from Bolivia, Peru, Canada, Argentina, Mexico. World output of WO_3 rose from 46,000,000 lb. (1938) to slightly under 70,000,000 lb. (est., 1943).

Most producers operated in 1943 under the Metals Reserve Co., Federal ore-buying agency, contracts calling for paying of \$24 per short ton unit f.o.b. shipping point. Qualified new producers were eligible to sell to Metals Reserve Co. at \$30 per short ton unit.

War consumption of tungsten involves its use in armor-piercing projectile tips, and, indirectly, as an alloy for high speed steels and tungsten carbide cutting tools. Popularly, it continues to be best known as the material from which electric light globe filaments are made. In 1942, the War Production Board cut the proportion of tungsten used in making certain alloy steels, substituting molybdenum, then relatively plentiful. In 1943, the relative scarcity of the two alloying elements was reversed, and former ratios were resumed.

See GEOLOGICAL SURVEY.

CHARLES T. POST.

TUNISIA. A French protectorate in North Africa. Capital, Tunis. With an area of 48,332 square miles, Tunisia had a population of 2,608,313 at the 1936 census, including 2,335,623 Arabs and Bedouins, 59,485 native Jews, 108,068 French citizens, 94,289 Italians, and 7,279 Maltese. The estimated civilian population on Jan. 1, 1940, was 2,730,000. Italian census figures published July 22, 1940, placed the number of Italians in Tunisia at 125,000. The 1936 census populations of the chief towns were: Tunis, 219,578; Sfax, 43,333; Sousse, 28,465; Bizerte, 25,872; Kairouan, 22,991. Moslems comprise 89.5 per cent of the total population. The school attendance on Dec. 31, 1937, was 96,520.

Production. The chief occupations are agriculture, stock raising, fishing, and mining. Yields of the chief crops in 1941 were (in metric tons): Wheat, 400,000; barley, 200,000; oats, 30,000 in 1939; olive oil, 27,000 in 1940-41 (not including oil extracted from residues). Wine production in 1939 was 988,000 hectoliters (hectoliter equals 26.42 U.S. gal.); cork (1940), 6,374 metric tons; wool (1938), 3,700 metric tons. Approximate output of the chief minerals was (in metric tons): Phosphate rock, 1,608,000 in 1939; iron ore, 800,000 in 1940; zinc, 6,000 in 1940; lead, 24,000 in 1940; mercury, 10 in 1940. The principal native manufactures are woolen goods, carpets, leather goods, and pottery.

Foreign Trade, etc. Trade was mainly with France until disrupted by the Allied landings in French North Africa in November, 1942. Wheat, olive oil, phosphates, and wine normally account for half the total exports. Budget estimates for 1940: Receipts, 811,198,000 francs; expenditures, 810,954,334. Transportation facilities in 1941 included 1,310 miles of railways, 7,887 miles of highways.

Government. Tunisia is a regency under the control of the French Foreign Office, which acts through a Resident General with headquarters in Tunis. There is normally a Ministry of 11 departments (8 French and 3 Tunisians); the Resident General holds the portfolio of Foreign Affairs. The nominal ruler (bey) is head of the reigning family, which has occupied the throne since 1705. Sidi Mohammed al Mounsaf (Moncef), who inherited the throne June 19, 1942, was ousted on May 15, 1943, and replaced by Sidi Lamine Bey. French Resident General, Gen. Charles Mast, appointed to succeed Vice Adm. Jean Esteva on May 7, 1943.

HISTORY

Political Developments. The battle for the mastery of Tunisia, which began in mid-November of 1942, ended with an overwhelming Allied victory six months later. British and American forces entered Tunis and Bizerte, respectively, on May 7 and within a few days the last Axis troops on Tunisian and African soil surrendered (see WORLD WAR for a full account of the campaign). Many cities and towns of the protectorate had suffered severely from shelling and bombing by the contend-

ing armies. The port and naval base of Bizerte was in ruins. In Tunis the port area was completely wrecked by Allied bombings, but the remainder of the city was virtually unscathed.

Axis Rule. Throughout the Tunisian campaign the key cities and the most populous part of the protectorate remained under German and Italian control, with the Germans in supreme command. The presence of the Axis forces and their political policies aggravated the deep tensions among the four racial communities of the permanent population—French, Italians, Arabs, and Jews. The French were divided into pro-Vichy and anti-Vichy factions, with the great majority secretly adhering to the de Gaulist cause. French political dominance was threatened from two directions—by the Italian Fascists who had proclaimed the annexation of Tunisia as one of their war aims, and by the Arab nationalists who with German encouragement demanded a greater measure of independence from French rule and equality of status with the European population. However the Arabs were bitterly opposed to the Italian Fascist aspirations in Tunisia and some placed their hopes for liberation in the British and Americans. In general the Arabs of the Tunisian countryside proved friendly to the Anglo-American forces even while the campaign hung in the balance. But in the Axis-occupied areas there was friction and some violence among French, Italians, and Arabs. To a greater or less degree, all three groups were hostile to the native Tunisian Jews.

The Vichy Resident General, Vice Adm. Jean Esteva, had refused to join in the armed resistance offered to the Axis invasion by some of the French forces in Tunisia. He permitted himself to be taken prisoner in Tunis and continued to function as Resident General more or less willingly under German direction, with the assistance of a number of Vichy French officials. Decrees discriminating against the Jews were issued. At the demand of the Axis commanders, the Jews and later Frenchmen and Italians were conscripted for labor service on the docks of Tunis and Bizerte. Some of the anti-Fascist Italians reportedly went to prison rather than cooperate with the Axis.

It was confirmed that neither Esteva nor the Bey of Tunis replied to President Roosevelt's messages of the preceding November asking permission for Allied forces to pass through Tunisia. Against his vigorous protest, Admiral Esteva was forcibly removed from Tunis in a German plane immediately prior to the fall of the capital. He was reported to have been sent to France.

French Political Measures. The Allied military victory brought Tunisia under the control first of the pro-Allied Giraud regime in Algiers and then (on June 3) of the French Committee of National Liberation headed by Giraud and Gen. Charles de Gaulle, leader of the Fighting French movement (see ALGERIA and FRANCE under *History* for the developments at Algiers). On May 7 General Giraud appointed Gen. Charles Mast as Resident General of Tunisia. Gen. Alphonse-Pierre Juin, field commander of Giraud's troops, filled the Resident General's post temporarily until Mast recovered from injuries sufficiently to assume charge.

The Algiers regime moved promptly to reassert French control over the Arabs and Italians and to punish those French military and civil officials who had collaborated with the Axis. On May 15 General Giraud deposed Sidi Mohammed al Mounsaif as Bey of Tunisia. He had maintained cordial relations with the Germans, who recognized him as "king," and apparently had used his great in-

fluence over the Arabs on behalf of the Axis and of Arab independence. The deposed temporal and spiritual ruler of Tunisia's Moslems was reportedly exiled to Madagascar. He was succeeded by Sidi Lamine, a member of the same dynasty and youngest son of Sidi Mohammed el Habib Bey, who reigned from 1922 to 1929. Sidi Lamine was formally installed on May 15 and the following day appointed a Cabinet headed by Salheddine Bacouche. The new ruler was known for his lack of interest in politics.

Early in September the French Committee of National Liberation at Algiers annulled the privileges that had been enjoyed by Italian residents of Tunisia under the Franco-Italian convention of 1896. Under this convention the Italian Government was entitled to maintain schools, hospitals, and similar institutions for the Italian population of Tunisia. The Fascist Government had used these privileges to agitate and prepare for the annexation of Tunisia. The French Committee took the position that the convention was annulled by Italy's attack upon France in 1940.

The Committee on August 5 also appointed a special commission to investigate the circumstances under which Axis troops seized control of Tunisia's key cities in November, 1942, and to determine the responsibility of the French civil and military officials involved.

Relief Operations. The inhabitants of Tunis and Bizerte suffered from an acute food shortage during the months preceding the Axis debacle. But within a week after the Allied entrance into Tunis, some 7,500 tons of food, clothing, and medical supplies had been distributed, in accordance with prearranged plans, by the North African Economic Board, an Anglo-American agency, with the assistance of the U.S. Office of Foreign Relief and Rehabilitation Operations and French authorities. Under the supervision of the OFRRO, a chain of "relief stores" was established in the newly liberated cities where persons with funds could buy essential foods and clothing. In addition, some direct "gift" relief was provided for penniless refugees. The bread ration that prevailed during the Axis occupation was doubled, and immediate steps taken to restore sanitary facilities and prevent epidemics. As a result of this coordinated program the need for charitable relief proved much less than anticipated and Tunisia made a relatively rapid return to normal.

TUNISIAN CAMPAIGN. See WORLD WAR under *Tunisia-Italy Campaigns*; also, MILITARY PROGRESS under *Campaign Lessons*.

TUNNELS. Projects involving extensive tunnel work are largely shelved during war time, owing to shortage of men and materials and to the desirability of concentrating on works that can be pushed to completion with relative rapidity. However, there are important tunnels under way, and others are deferred or halted temporarily. A notable addition to the system of submarine tunnels at New York City will be that already begun between Manhattan, at the Battery, and Hamilton St., Brooklyn. It will be 9,117 ft. long between portals and will consist of two 31-ft. tubes, each with a two-lane roadway. Although lined mainly with cast-iron, there will be short lengths of steel frame or reinforced concrete structures forming part of the land sections.

After sinking construction shafts, work began on the shield-driven tunnels from the Brooklyn end in June, 1941, and progressed 640 ft. in the west and

1,200 ft. in the east tube, with lining completed. From the New York or Manhattan end, which is mainly in rock, work was started in October, 1941, and bottom drifts 18 x 13 to 24 x 24 ft. have been driven 2,818 ft. and 2,825 ft. in the east and west tubes, respectively. At present, work is suspended but it will be resumed as soon as needed materials are again available, as the project is fully financed. Another project in the same vicinity is that for a submarine tunnel under the Narrows, entrance to New York harbor, between Brooklyn and Staten Island. In 1942, the State legislature appropriated \$50,000 for preliminary studies, and plans for the tunnel as a postwar project are under consideration. Its length will be 9,635 ft. between portals, and, like the Brooklyn-Battery tunnel, it will have two parallel two-lane tubes. An authorized project is the Midtown Manhattan tunnel crossing the city to connect the Queens Midtown tunnel under the East River (in operation since 1940) with the existing Lincoln tunnel under the Hudson. It will be 6,200 ft. between portals. The first tube of the Lincoln tunnels has been in service for some time. The second tube, started in 1941, is to be opened to traffic in 1944, the tunnel proper (7,482 ft. between portals) being already completed.

At Pittsburgh, the twin Liberty Tunnels, 5,900 ft. long, built some years ago for highway traffic through a ridge, have been modernized by new lining, paving, and lighting, and the installation of a traffic control system. Each tunnel has a two-lane roadway. On the Chesapeake & Ohio Ry., a single-track tunnel was completed at Afton, W. Va., to supplement one built in 1850 which is too small in section for modern locomotives and cars. The old one is 4,265 ft. long, lined partly with brick. The new one, 150 to 500 ft. distant, is 4,000 ft. long, 18 ft. wide, and 22 ft. high, with concrete lining throughout. In a somewhat similar case on the Delaware and Hudson R.R., near Binghamton, N.Y., the height of an old tunnel was increased 4 ft. by excavating the rock floor and underpinning the side walls. This work was carried out without interrupting traffic. The Northern Pacific R.R. will duplicate its old Bozeman Tunnel by one of larger size, since heavy traffic precludes enlarging the present tunnel.

Two long tunnels are included in the irrigation works of the U.S. Bureau of Reclamation. On the 13-mile Continental Divide tunnel, 11 miles are completed and work is in progress, as it is part of a project deemed important in developing food supplies. Water from a reservoir on the west slope of the Rocky Mountains will flow by gravity through the tunnel to irrigate lands on the eastern slope, in Colorado. Of the six-mile Duchesne tunnel on the Provo River project in Utah, two and three-fourths miles have been driven, but work is now halted. It will divert water from the Duchesne River (a Colorado River tributary) to the Provo River and Deer Creek reservoir for irrigation purposes.

Large tunnels are required at many dams on hydroelectric projects, at first to carry the river flow during construction of the dam and later to carry the overflow or to serve as conduits or sluices. Many of these are short, but on the Apalachia project of the Tennessee Valley Authority an 8-mile tunnel carries water from the dam to the power house. On the Pit River project of the Pacific Gas & Electric Co., of California, plant No. 5 includes two 19-ft. rock tunnels, 23,150 ft. and 5,050 ft. long.

To permit the production of ores containing lead, zinc, copper, etc., important in war in-

dustries, two tunnels are being driven in Colorado for the drainage of flooded mines. At Leadville, a tunnel 13,000 ft. long, with 6,000 ft. additional in three branches to different mines, is being driven from a portal elevation 9,950 ft. above sea level. An appropriation of \$1,400,000 was made by Congress and the work is under the supervision of the U.S. Bureau of Mines. The other work is extension of an existing tunnel for a mine near Ouray, where not only were the workings flooded, but the headworks of the shaft had been destroyed by snow slides. This tunnel will serve both for drainage and for bringing out the ore. The older tunnel is 5,540 ft. long, 7 x 8 ft. in section, while the new one, 9 x 9 ft., will be 6,300 ft. With the portal elevation at 10,673 ft., the tunnel will rise to 10,700 ft. From its end a raise or incline will be driven to reach the lower workings of the mine at an elevation of 12,500 ft.

In relation to tunnel ventilation, the U.S. Public Health Service has made studies in the Holland Tunnel, under the Hudson River at New York, used only by automobiles, to determine the effects of carbon monoxide and other toxic gases upon employees in the tunnel. The average content was 70 parts per million, but ranged from 20 to 200, and if it exceeds 250, an alarm bell is rung automatically. There was no evidence of temporary or permanent ill effects. In mines, the exhaust from oil-engine locomotives may be more toxic than that from the gasoline engines of automobiles.

In Mexico, the Tequixquiac tunnel, under construction, is for flood control in the valley occupied by the federal district and city of Mexico. It will be seven miles long. A commercial agreement of 1943 between Argentina and Chile provides for new roads on both sides of the Andes connected by a long tunnel. Tunnels will be included also on the 200-mile link to connect the railways of the two countries for a route between Buenos Aires and Antofagasta. To connect main-line routes on the Chinese railways, a tunnel under the Yangtze River at Nanking is proposed, as alternative to a bridge. In Australia, the State of Victoria is developing power on the Kilwa River by a number of tunnels connecting a series of dams and reservoirs. A 21-mile tunnel through a mountain range is proposed by the Union of South Africa as part of an irrigation project.

In Canada, a short but important tunnel forms part of a project for draining Steep Rock Lake, in Ontario, the bed of which is underlaid by an extensive deposit of iron ore. The tunnel, 1,200 ft. long, opens into the bed of the lake by a 115-ft. raise or incline driven upward at an angle of 50 degrees and opened by a final heavy blast. The tunnel is 10 x 12 ft. in section, except that the raise is 14 ft. square. The longest tunnel on the Canadian National Railways is that under Mount Royal, 3.1 miles, forming the approach to the new Montreal terminal station, which was put in service in July, 1943.

On the government railways of Switzerland, part of a tunnel two miles long, near Courgenay, collapsed in February. Traffic was handled over the Ragnier Pass by busses and motor trucks until the line was reopened. Some tunnels on the railroad crossing the Brenner Pass, between Germany and Italy, were reported blocked by Allied bombing attacks. A tunnel of very exceptional character was that driven (in 1941) by American and English prisoners of war to escape from a camp south of Algiers, Africa. It was some 250 ft. long, but only 2 ft. wide and 2 to 3 ft. high, starting under a barrack building and passing under the wall of

the camp and a line of barbed-wire fencing. Tools and methods were improvised and extreme caution was necessary.

The centennial of the Thames Tunnel, in London, England, was celebrated in March, 1943. Work was begun in 1825, but many serious difficulties were encountered. It is 1,200 ft. long between the shafts, and is formed with twin brick-lined compartments 13 ft. 9 in. wide and 16 ft. 4 in. high. For driving through the soft ground, a shield advanced by jacks was invented by the engineer, Marc Isambard Brunel. Although built for pedestrians, it was purchased in 1866 by the East London Railway, which began operating the line in 1869. It is still in operation as a link between railway systems north and south of the Thames.

See DAMS; WATER SUPPLY.

E. E. RUSSELL TRATMAN.

TURKEY. A republic comprising parts of Asia Minor and the Balkan peninsula as well as Imbros, Tenedos, and the Rabbit Islands in the Aegean Sea. Capital, Ankara (Angora).

Area and Population. The area, including the Sanjak of Alexandretta (Hatay) but excluding 452 sq. mi. of marshes and 3,256 sq. mi. of lakes, is 296,346 sq. mi. (13,012 in Europe and 283,334 in Asia). The Sanjak of Alexandretta (area 1,930 sq. mi.; pop., about 228,000) was ceded to Turkey by France on June 23, 1939. The population of Turkey at the census of Oct. 20, 1940, was 17,869,901 (16,158,018 at the 1935 census). Populations of the chief cities in 1940 were: Istanbul, 789,346; Izmir (Smyrna), 184,362; Ankara (Angora), 155,544; Seyhan (Adana), 89,990; Bursa (Brusa), 77,348; Eskisehir, 60,514; Gaziantep, 57,314; Konya, 56,698; Kayseri, 53,908.

Defense. Military service is compulsory. As of Jan. 1, 1941, an estimated 800,000 troops, excluding the air force of 3,500, were under arms. The air force in 1940 had about 370 first-line and 500 second-line planes. During 1939-43 the Turks made substantial progress in modernizing their army with weapons supplied by Germany, Britain, and the United States. The navy in 1942 consisted of the rebuilt German battle cruiser *Goeben* (Turkish name, *Yavuz*) of 23,100 tons, 2 old but modernized cruisers, 4 destroyers, 9 submarines, 2 gunboats, 3 minesweepers, and various auxiliary craft. Two new destroyers and a submarine were delivered to Turkey by the British early in 1942. See *Finance*.

Education and Religion. Illiteracy was estimated at 55 per cent of the adult population in 1935, but only 2,517, 878 were literate in the Latin alphabet, introduced in 1928. Students enrolled in 1939-40: Primary, 905,139; secondary, 92,327; lycées, 26,401; normal schools, 4,120; professional schools, 9,504; universities and other institutions of higher education, 12,325. At the census of 1935 there were 15,838,673 Moslems, 125,046 Orthodox Christians, 78,730 Jews, 32,155 Roman Catholics, 44,526 Gregorians, 11,229 Armenians, 8,586 Protestants, and 12,967 adherents of other religions.

Production. Agriculture supports about four-fifths of the total population. The 1942 cereal crops, with estimated yields for 1943 in parentheses, were (in metric tons): Wheat 2,736,900 (4,000,000); barley, 1,417,151 (1,500,000); rye, 309,672 (350,000); oats, 243,244 (300,000); corn, 665,731 (750,000). Yields of other leading crops in 1942 were (metric tons): Cotton, 50,000; raisins, 50,000; figs, 18,000; olive oil, 30,000; tobacco, 70,000; rice, 33,000 in 1941. Livestock in 1942 included 17,283,000 sheep, 37,703,000 Angora goats, 8,832,000 other goats, 7,588,000 cattle, 690,000

buffaloes, 763,000 horses, 97,000 camels, 70,000 mules, and 1,354,000 donkeys. Production of the chief minerals was (in metric tons): Coal, 2,508,000 in 1942; copper (smelter), 6,746 in 1942; chrome ore, 126,575 in 1940; iron ore, 180,344 in 1940; antimony (metal content), 372 in 1940; quicksilver, 17 in 1940; magnesite, 845 in 1940; emery, 9,113 in 1940; borax, 5,380 in 1940; lead (smelter), 3,640 in 1940.

The 1940 industrial production included (metric tons): Cotton yarn, 27,433; woolen yarn, 8,429; paper, 9,540; cement, 266,637 (180,000 in 1942); glass, 7,353. A government-sponsored industrialization program inaugurated in 1934 resulted in the establishment of numerous factories, including steel, textile, paper, and flour mills; glass, soap, and chemical factories; sugar refineries; cement and canning plants; olive oil presses and refineries, leather tanneries, hydroelectric plants, etc.

Foreign Trade. Publication of official trade statistics was discontinued May 31, 1941. For the first five months of 1941 imports were valued at £T32,849,000 and exports at £T73,921,000. For the calendar year 1940 imports were £T68,922,700; exports, £T111,446,500. Germany was Turkey's leading trade partner before World War II. Beginning in 1942, Anglo-American trade with Turkey increased rapidly. British Empire exports to Turkey in 1942 were unofficially reported at £T60,000,000 and British Empire imports from Turkey at £T64,000,000. United States exports to Turkey in 1942 (exclusive of lend-lease goods) were valued at about \$15,000,000; U.S. imports from Turkey, \$17,000,000. For the distribution of trade and the principal exports in 1940, see 1943 YEAR BOOK.

Finance. Ordinary budget estimates for the fiscal year ended May 31, 1944, anticipated receipts of £T486,720,500 and expenditures of £T486,717,349, as contrasted with £T394,328,340 and £T394,326,938, respectively, for 1942-43. The ordinary defense appropriation for 1943-44 was £T116,031,238 and extraordinary appropriations of £T220,000,000 were voted by the National Assembly up to Sept. 30, 1943. The Minister of Finance stated that in 1942-43 extraordinary defense appropriations totaled more than £T400,000,000. In 1941-42 actual receipts were reported at £T309,700,000 and total expenditures at £T564,700,000. Public debt on May 31, 1939: £T619,385,681 (foreign, £T223,795,688). Currency in circulation totaled £T281,000,000 on Dec. 31, 1939, and £T732,000,000 on June 30, 1943. Average exchange rate of the Turkish pound: \$0.7259 in 1940, \$0.7624 in 1941.

Transportation. As of Dec. 31, 1940, railway lines extended 4,619 miles, of which all except 270 miles were state-owned and operated. A law of June 3, 1941, authorized extension of railway lines from Diyarbekir and Elazig stations to the frontiers of Iraq and Iran, respectively. Construction of these lines and of the Zonguldak-Kozlu line connecting the Kozlu coal basin with the Black Sea was carried forward during 1941-43. A 57-mile line from Diyarbekir to Batman was opened to traffic in June, 1943. Highways extended 25,274 miles in 1940. During the summer months there was a daily air service between Ankara and Istanbul; no foreign airlines entered the country. Istanbul handled 76.1 per cent of the country's imports and 35.9 per cent of the exports in 1939. The Turkish merchant marine on May 1, 1941, included 125 vessels of 190,800 gross tons. British contractors were improving the ports of Mersin and Iskenderun (Alexandretta) during 1943.

Government. The Constitution of Jan. 20, 1921, as amended in 1924 and 1934, vests executive and legislative power in the Grand National Assembly, consisting of 429 deputies elected for four years by universal male and female suffrage. The Assembly exercises executive power through the President, elected for four years by the Assembly, and through the Council of Ministers, chosen by the President. In practice the President wields dictatorial powers. President in 1943, Gen. Ismet Inonu, who was elected to succeed President Kemal Ataturk on Nov. 11, 1938, and reelected Apr. 3, 1939. The People's party, the only legal political organization, in December, 1938, elected President Inonu as President General of the party for life. The Cabinet as reorganized July 9, 1942, was headed by Shukru Saracoglu.

On Oct. 19, 1939, Turkey signed a 15-year military alliance with Great Britain and France (see 1939 YEAR BOOK, p. 769, for its provisions). A ten-year nonaggression treaty was signed with Germany June 18, 1941. For developments in 1943, see below.

HISTORY

Neutrality Policy. The course of Turkish foreign policy remained one of the great question marks of European affairs throughout 1943. As in the preceding war years, Allied and Axis diplomacy engaged in a fierce tussle to sway Turkey from its neutral path. There was, however, a significant change in the rival policies of the belligerents, reflecting the declining military fortunes of the Axis powers.

During 1941 and 1942 Germany and Italy had employed every conceivable threat and inducement in a vain effort to force Turkey into the struggle on the side of the Axis, while the British, with American support, concentrated upon keeping the Turks neutral and thus blocking the German pathway into the Middle East. This situation was reversed following the German defeat at Stalingrad, the expulsion of Axis forces from North Africa, and the ensuing successful Allied offensives. Now it was the turn of the Allies to urge Turkish intervention on their side, while the German Ambassador at Ankara, Franz von Papen, fought a rearguard action by trying to bolster Turkish neutrality.

In line with their national interests and sympathies, the Turks gradually shifted from the more or less strict neutrality of previous years to a more openly pro-Allied nonbelligerency. Twenty-three American and seven British airmen, interned in Turkey for nearly a year after forced landings, were released April 30. Seven more American fliers who landed in Turkey after the great raid of August 1 on the Ploesti oil fields were released almost immediately. But the Turks firmly refused to enter the war or to place Turkish bases at the disposal of the Allies.

The four main objectives of Turkish foreign policy, proclaimed on various occasions during 1942, remained unchanged at the close of 1943. They were: (1) maintenance of nonbelligerency as long as possible, (2) adherence to the Anglo-Turkish alliance of Oct. 19, 1939, (3) observance of the nonaggression pacts concluded with Russia on Mar. 24, 1941, and with Germany on June 18, 1941, and (4) armed resistance against aggression from any source. Meanwhile the Turks took full advantage of the rivalry for their favor among the warring powers to obtain further modern equipment for the Turkish armed forces and valuable economic concessions from both sides.

Adana Conference. The first Allied move of 1943 to bring Turkey into more active cooperation was agreed upon at the Roosevelt-Churchill conference at Casablanca in January. It was announced in London February 2 that Prime Minister Churchill and President Ismet Inonu, accompanied by high political and military officials of their respective governments, had concluded a two-days' conference at Adana in south central Turkey, which took place on January 30-31. A communiqué stated that the conferees reached agreement on policy with respect to "the present European situation," postwar problems, and "the manner in which Great Britain and the United States would be able to help Turkey materially to consolidate her own general defensive security."

The conference was held at Churchill's request, but the fact that the Turkish leaders agreed to such a gathering on Turkish soil was considered an act of defiance toward Germany that would not have been conceivable six months earlier. However an official Turkish statement asserted that Churchill did not ask Turkey to enter the war and that "the Turkish Government did not undertake any such commitment."

The practical results of the Adana conference were first of all an increase in British and U.S. shipments of war materials, railway rolling stock, and other industrial equipment to Turkey and the provision of additional Allied shipping to speed up deliveries. Secondly, closer liaison was developed between the Turkish and British armed forces in the Middle East to permit coordination of their military efforts in case Turkey entered the conflict.

Air Chief Marshal Sir Sholto Douglas, Commander in Chief of Allied Air Forces in the Middle East, returned to Ankara on March 12 for further conferences with the Turkish General Staff. Gen. Sir Henry Maitland Wilson, British Commander in Chief in the Middle East, continued these discussions during a four-day visit to Ankara on April 15-19. He announced that a coordinated agreement for carrying out the decisions of the Casablanca and Adana conferences had been reached with the Turkish General Staff. Meanwhile a Turkish military mission had inspected Allied forces in the Middle East and North Africa, and Turkish airmen had been sent to Egypt to train with the Royal Air Force. About the same time about 100 Turkish army officers were sent to the United States to study technical aspects of warfare.

Russo-Turkish Negotiations. A third result of the Adana Conference was the initiation a week later of a renewed effort to reach a permanent Russo-Turkish accord that would clear the way for full Turkish cooperation with United Nations military forces in an invasion of the Balkans. These negotiations were launched on February 6 when Premier Saracoglu was the guest of honor at a formal dinner at the Soviet Embassy in Ankara, which was attended by the American and British Ambassadors. Anglo-American diplomacy had worked throughout 1942 to bring the Turks and Russians together, but their progress had been slowed by Axis intrigues and by Turkish suspicions of Soviet aims in the Straits, the Balkans, and Iran. At Adana, according to a leading Turkish editor, Churchill gave assurances "of Russia's goodwill plus the Allies' intention that Turkey will not be faced with any postwar aggression."

The weeks of intense diplomatic activity that followed apparently achieved some definite progress. Premier Saracoglu told the Sixth Congress of the Turkish People's party on June 15 that relations between Moscow and Ankara had definitely

improved. However the expected announcement of a Russo-Turkish agreement on war and postwar aims and objectives was not forthcoming. The negotiations were still in progress when a commentator in the Soviet publication *War and the Working Class* accused Turkey on September 2 of prolonging the war by its continued neutrality. The editor of a leading Istanbul newspaper replied that the Allies had profited from Turkish neutrality and charged that Moscow was following a policy of cold-blooded self-interest in its death struggle with Nazi Germany.

German Relations. The Turkish Government displayed a capacity for a somewhat similar "realism" in its relations with Hitler's Reich. As explained in the 1943 YEAR BOOK, p. 696, the Turks had yielded to German pressure in 1942 and agreed to divert the output of its valuable chromite deposits from Britain to Germany upon expiration of the British chromite-purchase agreement on Jan. 8, 1943. The agreement with Berlin, however, was contingent upon the delivery to Turkey by the end of 1942 of war material to the value of 18,000,000 Turkish pounds.

Germany's failure to make these deliveries in full gave the Turks an opportunity to cancel the chromite arrangement had they so desired. The Allies exerted every influence to deprive the Reich of this vital mineral, essential to the hardening of armor plate, but were out-manuevered and outbid by the Germans.

In December, 1942, the German Ambassador renewed the offer to Turkey of a credit of 100,000,000 reichsmarks to be used for the purchase of German war material. This credit, first granted in 1939, had been suspended upon the conclusion of the Anglo-Turkish alliance. The credit was to be redeemed in ten years at the rate of 12,500,000 reichsmarks annually, payable in Turkish products. The Turks signed an agreement in Berlin on December 31 accepting the German offer, after the Reich Government had demonstrated its ability to make the required arms deliveries.

This agreement enabled the Germans to demand fulfillment of the 1942 chromite accord. To emphasize their point, the Germans were reported on January 10 to have stopped all shipments to Turkey pending "clarification" of Ankara's attitude on the chromite deal. The Turks then formally agreed to fulfill their part of the contract. After weeks of bargaining, a new German-Turkish trade and clearing pact was signed in Ankara April 18. It provided for the exchange of goods to the value of 120,000,000 reichsmarks up to May 1, 1944.

According to an Istanbul dispatch to *The New York Times* of August 16, the Germans were making the scheduled deliveries of arms and other goods under the chromite and barter contracts, but were having difficulty in obtaining the chromite from Turkey. The Turks were said to be giving priority for use of their limited railway rolling stock and shipping in handling Allied lend-lease materials.

To keep the Turks from yielding to Allied pressure for military intervention, the Germans in June invited a Turkish military mission to inspect sectors of both the Russian front and the fortifications guarding western Europe against an Allied invasion. In October Berlin reportedly invited the Turks to garrison the Italian Dodecanese islands with Turkish troops—an offer obviously calculated to create dissension among the United Nations. It was rejected.

Because of inability to use air bases on the adjacent Turkish coast, the Allies were unable to pre-

vent German recapture in November of Leros, Kos, and other Italian and Greek islands in the Aegean Sea occupied by Allied forces following the Italian surrender. A major objective of the German campaign in the Aegean area was to keep Turkey neutral by a display of German strength, and the demonstration appeared to have its desired effect.

Allied Pressure Increased. As the year drew toward a close, the Allies displayed growing impatience at Turkey's stubborn neutrality. Anglo-American lend-lease aid to the Turks had been based upon the understanding that Turkish bases would be made available for Allied use as soon as Turkey's defensive position was secure and the Allies were in a position to make good use of the bases. Such co-operation from Turkey was called for under the Anglo-Turkish alliance, but the Turks continued to side-step Allied requests for more effective aid by pointing out that Istanbul and Adrianople were fully exposed to Axis air attacks. They insisted on further arms deliveries and on a definite understanding with the Soviet Union, guaranteed by the Anglo-American powers, before they would agree to the cession of bases or active intervention in the war.

The problem of winning active Turkish collaboration was one of the issues discussed at the conference of American, British, and Soviet Foreign Ministers at Moscow late in October (see UNITED NATIONS). That conference was followed by a more intensive Allied diplomatic campaign in Turkey. A conference between the Turkish and British Foreign Ministers followed in Cairo on November 5-8. Press reports indicated that Foreign Secretary Eden urged Turkey, in the interests of her future good relations with Russia, to take action that would help to divert German troops from the Russian front.

Foreign Minister Menemencioglu reported on his conversations with Eden before a lengthy secret session of the Turkish Grand National Assembly on November 16. A communiqué stated that the Assembly had "discussed questions resulting from the exigencies of the treaty of alliance" with Britain and that the Government's policy had been approved. However there was no outward change in Turkish foreign policy, despite a press report from Ankara on November 17 indicating that Turkey was giving undercover assistance to Allied armed forces.

Following the adoption of an Allied military timetable for 1944 at the Tehran Conference early in December, the Allied leaders again raised the subject of Turkish cooperation at a full-dress conference. Immediately after the Churchill-Roosevelt-Stalin meeting at Tehran broke up, President Inonu was invited to Cairo to confer with Roosevelt and Churchill. The conferences, lasting for three days (Dec. 4-6), were attended by the British and Turkish Foreign Ministers and by Harry Hopkins, assistant to President Roosevelt. A communiqué issued December 7 revealed only that they had "examined at length the policy to be followed, taking into account the joint and several interests of the three countries."

There were strong indications that the Allied leaders called upon Turkey's President to fulfill Turkish obligations under the Anglo-Turkish alliance without undue delay. It was reported December 8 that Turkey had established militarized zones three miles wide on each side of the Bosphorus, that surveillance of Axis nationals in Turkey had been tightened, and other precautionary measures taken.

Nevertheless Foreign Minister Menemencioglu

announced upon his return to Ankara the same day that Turkey's foreign policy remained unchanged but that the Anglo-Turkish alliance had been strengthened as a result of the Cairo discussions. On December 14 President Inonu in a broadcast to the nation declared that Turkey had never been a neutral country during the war. "She is in reality," he said, "one of the United Nations, contributing her share to winning this great struggle." But the year ended with the Turks holding to their stand that if they entered the war it would be on their own terms and at a time they considered opportune.

Balkan Policy. The Turks meanwhile had displayed a growing desire to reconstitute and extend the old Balkan Entente as a means of forestalling and checking Russian expansion and penetration into that area. The Turkish press was critical of Soviet opposition to federation movements in the Balkans and in Eastern Europe generally. While attempting to overcome Russian opposition on this score, Ankara strengthened its ties with the Greek and Yugoslav Governments-in-Exile and attempted to induce Bulgaria and Rumania to withdraw from the conflict before their positions became hopelessly compromised. Axis attempts to use Turkey's anxiety about the Balkan situation as a means of launching a Berlin-inspired peace offensive were summarily rejected by the Turks.

Internal Politics. An edict issued by the People's party on January 13 dissolved the Grand National Assembly in preparation for parliamentary elections, which were held in February. The new National Assembly, composed entirely of People's party members, convened on March 8 and unanimously reelected President Inonu to a second term of four years. The Cabinet resigned at the same time and was reorganized March 9 with Premier Saracoglu and six of the former Ministers retaining their posts, including Recep Peker (Interior), Gen. Ali Riza Artunkal (National Defense), Numan Menemencioglu (Foreign Affairs), Fuad Agrali (Finance), and Hasan Ali Yucel (Education). Premier Saracoglu won a vote of confidence from the National Assembly on March 17 after a speech expressing the Government's full sympathy with the Allied cause.

A suggestion for partial demobilization of the large force that Turkey had kept under arms since 1940 was firmly rejected by the Premier in the National Assembly on June 5. When the National Assembly reconvened November 1, President Inonu stressed the Government's faith in and support of a world order "based on the sincere co-operation of all free nations of the world, great and small."

Capital Levy Controversy. The enforcement, beginning in December, 1942, of a drastic tax on wealth authorized by the Grand National Assembly on Nov. 11, 1942, provoked widespread repercussions, including protests from the Christian and Jewish minorities in Turkey and from the Greek and other foreign governments.

According to Government spokesmen, the wealth tax, or *varlik vergisi*, was a last resort in the effort to curb an alarming inflationary trend produced by wartime conditions. There was an acute scarcity of imported goods, coupled with a labor shortage, heavy government deficits, and a rapid expansion of the currency resulting from the maintenance of nearly a million men under arms at a cost of more than a million Turkish pounds a day. Speculators and profiteers had reaped huge profits in deals in scarce commodities. There was a tremendous increase in prices and a flight of

capital from paper money into tangible wealth. Currency notes in circulation rose from £T281,000,000 on Dec. 31, 1939, to £T757,000,000 on Oct. 31, 1943.

The Turkish peasantry were already heavily taxed. The Government collected 8 per cent of their crops as a direct levy and required them to sell 12 per cent of their cereal crops to the state at fixed prices. Since the peasants could not stand a further tax increase, the Government imposed its capital levy on wealth and excess profits of the following classes of the population: salaried workers employed by private firms, important farmers (5 per cent of the value of their properties was the maximum levy), realty owners, companies and individuals engaged in business since 1939, and middlemen and commissionaires. The law provided that persons failing to pay the capital levy within one month were subject to forced labor on nonmilitary projects.

Gross discrimination in the application of the levy by local assessment commissions aroused charges that the Government was intent upon driving the Christian and Jewish minorities and certain foreign-owned concerns out of business, thus ending minority control of a large part of the commercial life of the country. The Government flatly denied this charge, declaring that the tax was impartially aimed at all wealthy tax evaders and profiteers. However a survey made by C. L. Sulzberger of *The New York Times* showed that the assessments levied on businesses and fortunes of Christians and Jews possessing Turkish citizenship were much heavier than on Moslem Turkish businesses. He quoted a survey by the Foreign Chamber of Commerce showing the following ratio of assessments for Istanbul Province: Moslem Turkish merchants, 4.94 per cent; Greek Orthodox Turkish merchants, 156 per cent; Jewish Turkish merchants, 179 per cent; Armenian Christian Turkish merchants, 232 per cent.

Foreign-owned businesses and fortunes suffered similar discrimination. Those owned by Greeks, Yugoslavs and Italians were taxed almost as heavily as those of the Turkish minorities. German, Bulgarian, and French enterprises were taxed less severely while the levies assessed against British and American-owned enterprises were relatively light. The capital levy was so drastically applied to the Turkish minorities that thousands of them were said to have been ruined financially. An estimated 30,000 persons, almost all of them members of the minorities, were unable or unwilling to meet the payments demanded and were sent to camps in eastern Turkey for forced labor on roads. By no means all of these prisoners were wealthy or even moderately well-to-do.

The discriminatory features of the law and the forced labor penalty aroused a vigorous protest from the Greek Government and brought indirect representations from the British and U.S. Governments. Just before President Inonu left Ankara for his meeting with Roosevelt and Churchill at Cairo, a decree was issued (December 2) ordering the release from forced-labor camps of those who had paid part of the amount assessed against them.

In August Premier Saracoglu said that the Government had originally hoped to obtain £T250,000,000 through the capital levy, but that actually £T300,000,000 had already been collected. But in Istanbul Province alone the assessments levied totaled £T344,000,000, or nearly half the total amount of currency in circulation. According to the Premier, the wealth tax would enable the Government to hold inflation in check for another year.

If the war was not over by that time, he said, further emergency measures would be required.

Industrialization Continued. Notwithstanding financial-economic difficulties and war threats, the Government pressed steadily ahead with the long-term program of industrialization through which it hoped to modernize and strengthen the nation. New industrial plants opened during the year included a woolen textile factory, a cement plant, a second paper and cellulose plant, several chemical units, and two cotton-spinning mills. The capacity of the Karabuk iron and steel works was expanded. A number of new irrigation and flood-control projects were launched.

Other Events. The series of disastrous earthquakes that had devastated various districts during previous years was extended in 1943. About 2,000 persons were killed in the town of Adapazar, near Istanbul, on June 20 (see *EARTHQUAKES*). Another earth shock that rocked the Black Sea coast north-east of Ankara on November 26 cost an estimated 4,000 lives. A serious typhus epidemic broke out in Istanbul and other Turkish cities late in May, but it was brought under control.

See *BULGARIA, GERMANY, GREAT BRITAIN, GREECE, and HUNGARY* under *History*; *CHROMIUM*; *UNITED NATIONS*.

TURKMENIAN SOVIET SOCIALIST REPUBLIC. See *UNION OF SOVIET SOCIALIST REPUBLICS* under *Area and Population*.

TURKS AND CAICOS ISLANDS. See *JAMAICA*.

TUTUILA. See *SAMOA*.

TVA. See *TENNESSEE VALLEY AUTHORITY*.

TWENTIETH CENTURY FUND. See *PHILANTHROPY* under *Foundation Activities*.

TYGON. See *PLASTICS*.

TYPHOON. See *AERONAUTICS* under *British Types*.

UBANGI-SHARI. See *FRENCH EQUATORIAL AFRICA*.

UGANDA. A British protectorate in East Africa. Area, 93,981 square miles, including 13,680 square miles of water. Population (1942), 3,865,608 (3,884,981 Africans, 18,381 Asiatics, 2,246 Europeans). Education (1939): 292,097 children attended schools. The college at Makerere provides higher education. In 1942 the cost of African education was £124,000. Bantu languages are spoken by some 2,400,000 Africans. Chief towns: Entebbe (capital), Kampala, and Jinja.

Production and Trade. The main products are cotton (100,000 bales in 1942-43), cottonseed, coffee, sugar, groundnuts, sesame, pyrethrum, hides, skins, salt, tin, gold, and timber. Large number of cattle, sheep, and goats are raised. Trade (1941): imports totaled £2,345,629 (cotton fabrics and manufactures £687,657); exports £5,710,900 (cotton £4,262,235, coffee £597,271, sugar £162,197, hides and skins £103,839). The value of re-exports from Uganda and Kenya in 1941 was £3,494,000. Kenya, Tanganyika, and Uganda have a uniform customs tariff.

Communications. There are steamer services on the lakes of Victoria, Kioga, and Albert. Railways (1941): Kenya and Uganda railways carried 1,643,156 passengers (exclusive of 204,522 troops and prisoners of war) and 2,257,761 tons of freight. Roads (1940): 2,500 miles.

Government. The 1942 budget estimates indicate a surplus of over £302,200. Finance (1941): revenue £2,178,283; expenditure £1,937,926. Public debt, Dec. 31, 1940, £2,850,000. The Governor, in carrying out the functions of government, is assisted by an executive council of 7

members and a legislative council of 6 official members and 4 nominated unofficial members. Governor and Commander in Chief, Sir Charles Dundas (app. July 8, 1940).

UKRAINIAN SOVIET SOCIALIST REPUBLIC. See *UNION OF SOVIET SOCIALIST REPUBLICS* under *Area and Population*.

ULSTER. See *IRELAND, NORTHERN*.

ULTRAVIOLET LIGHT. See *PHYSICS*.

UNDERGROUND WARFARE. See *BULGARIA, EIRE, GERMANY, IRELAND, NORTHERN; RUMANIA, SOUTH AFRICA, SPAIN, and the Axis-occupied countries, under History*.

UNEMPLOYMENT. See *LABOR CONDITIONS* under *Employment and Unemployment* and the topics there listed. For *Unemployment Insurance*, see *SOCIAL SECURITY BOARD*.

UNFAIR LABOR PRACTICE CASES. See *NATIONAL LABOR RELATIONS BOARD*.

UNFEDERATED MALAY STATES. See *BRITISH MALAYA*.

UNIFORM CONTRACT TERMINATION ARTICLE. See *BUSINESS REVIEW*.

UNIFORM LAWS. See *STATE LEGISLATION* under *Interstate Legislation and Uniform Laws*.

UNIFORMS. See *FASHION EVENTS*; *FEDERAL BUREAU OF INVESTIGATION*.

UNION ISLANDS (Tokelau). See *TOKELAU*.

UNION OF SOUTH AFRICA. See *SOUTH AFRICA, UNION OF*.

UNION OF SOVIET SOCIALIST REPUBLICS (U.S.S.R.). A State comprising the greater part of the former Russian Empire. Capital, Moscow.

Area and Population. The area as of Aug. 31, 1939, was about 8,200,000 square miles (73 per cent in Asia and 27 per cent in Europe). The census of Jan. 17, 1939, showed a population of 170,467,186 (88,802,205 females and 81,664,981 males), compared with 147,027,915 at the 1926 census. The urban population at the 1939 census was 55,909,908; rural, 124,557,278. Following the outbreak of World War II on Sept. 1, 1939, the following territories were annexed to the Soviet Union, only to be reconquered by German, Finnish, and Rumanian forces in 1941.

AREAS INCORPORATED INTO THE U.S.S.R.

	Date of annexation	Area, sq. miles	Population Jan. 1, 1940*
Eastern Poland	Sept. 28, 1939	75,000 ^a	12,500,000 ^{ab}
Finnish provinces	Mar. 12, 1940	13,558	?
Rumanian provinces:			
Bessarabia	June 28, 1940	17,151	3,200,000
Northern Bukovina . .	June 28, 1940	1,737	500,000
Lithuania ^a	Aug. 3, 1940	22,964	2,925,000
Latvia	Aug. 5, 1940	25,402	1,951,000
Estonia	Aug. 7, 1940	18,359	1,122,000
Total		174,171	22,198,000

* Taking into account the transfer of Vilna Territory (area, 2,570 sq. miles; pop. 457,000) to Lithuania by the Soviet-Lithuanian treaty of Oct. 10, 1939. ^a Approximate. ^{ab} Almost all of the inhabitants of Finnish territories ceded to the U.S.S.R. (about 450,000) were evacuated to Finland. ^c Estimated.

The newly acquired Polish territories were incorporated in the Ukrainian and White (Byelo) Russian Soviet Socialist Republics, Oct. 1-2, 1939. The Finnish provinces on Mar. 31, 1940, were joined to the Karelian S.S.R., which was then renamed the United Karelo-Finnish S.S.R. and raised to the status of a constituent republic of the U.S.S.R. The major part of Bessarabia was merged with the Moldavian Autonomous S.S.R. on Aug. 2, 1940, to form the constituent Moldavian S.S.R.

The remainder of Bessarabia, together with Northern Bukovina, was incorporated in the Ukrainian S.S.R. Lithuania, Latvia, and Estonia were given the status of constituent republics upon annexation. The addition of these five new units raised the number of constituent republics of the Soviet Union from 11 to 16. These republics, with their capitals, areas, and populations (Soviet statistics), are given in the accompanying table.

U.S.S.R.: CONSTITUENT REPUBLICS

States	Capitals	Sq. kilo- meters	Populations 1939
Russian S.F.S.R.	Moscow	16,510,500	109,278,614
White (Byelo) Russian S.S.R.	Minsk	234,800	10,300,000
Ukrainian S.S.R.	Kiev	533,300	38,900,000
Azerbaijan S.S.R.	Baku	86,000	3,209,727
Uzbek S.S.R.	Tashkent	378,300	6,282,446
Armenian S.S.R.	Erivan	30,000	1,281,599
Georgian S.S.R.	Tbilisi	69,600	3,542,289
Turkmenian S.S.R.	Ashkhabad	443,600	1,253,985
Tajik S.S.R.	Stalinabad	143,900	1,485,091
Kazakh S.S.R.	Alma Ata	2,744,500	6,145,937
Kirghiz S.S.R.	Frunze	196,700	1,459,301
Karelo-Finnish S.S.R.	Petrozavodsk	196,000	463,100*
Moldavian S.S.R.	Tiraspol	52,900	3,200,000
Latvian S.S.R.	Riga	65,791	1,950,000
Lithuanian S.S.R.	Vilna	52,822	2,880,000
Estonian S.S.R.	Tallinn	47,549	1,120,000

* Exclusive of inhabitants remaining in ceded Finnish area.

The occupation by Axis forces during 1941 and 1942 of a large area of European Russia caused a huge migration of population and industry to the east.

The populations of the 29 leading cities at the 1926 and 1939 censuses, with the percentage increases for that period, were as follows:

POPULATIONS OF CITIES: 1926 AND 1939

City	Dec. 17, 1926	Jan. 17, 1939	% gain
Moscow	2,029,425	4,137,018	203.9
Leningrad	1,690,065	3,191,304	188.8
Kiev	513,637	846,293	164.8
Kharkov	417,342	833,432	199.7
Baku	453,333	809,347	178.5
Gorky	222,356	644,116	289.7
Odessa	420,862	604,223	143.6
Tashkent	323,613	585,005	180.8
Tbilisi	294,044	519,175	176.6
Rostov-on-Don	308,103	510,253	165.6
Dnepropetrovsk	236,717	500,662	211.5
Stalino	174,230	462,395	265.4
Leningrad	151,490	445,476	294.1
Sverdlovsk	140,300	425,544	303.3
Novosibirsk	120,128	405,589	337.6
Kazan	179,023	401,665	224.4
Kuibyshev	175,636	390,267	222.2
Saratov	219,547	375,860	171.2
Voronezh	121,612	326,836	268.7
Yaroslavl	114,277	298,065	260.8
Ivanovo	111,460	285,069	255.8
Archangel	76,774	281,091	366.1
Omsk	161,684	280,716	173.6
Chelyabinsk	59,307	273,127	460.5
Tula	155,005	272,403	175.7
Minsk	131,803	238,772	181.2
Vladivostok	107,980	206,432	191.2
Stalinsk	3,894	169,538	4,353.8
Kirov	62,097	143,181	230.6

Education. During the two decades ending in 1937, illiteracy was reported to have declined from 67.7 per cent to less than 8 per cent. In the academic year 1940-41, pupils attending elementary and secondary schools numbered about 36,765,000. There were about 1,200,000 students in technical schools and workers' faculties; about 1,800,000 children in nurseries and kindergartens, exclusive of 5,700,000 children placed in collective farm nurseries and kindergartens during harvest season; and 550,000 or more students in 781 universities and colleges. Also see *History*.

Production, etc. In the Soviet Union transport and communications are conducted as Federal departments. Banking is centralized in a State Bank under government control. Distribution is socialized,

with retail trade in the cities conducted mainly by local administrative bodies and in the villages by consumer cooperatives. Industrial production is carried on largely by State enterprises, operating under the general direction of appropriate Commissariats (government departments). A State Planning Commission (Gosplan) plots the objectives for each year and for five-year periods. An Economic Council acts as a coordinative body. An organization in the Commissariat of State Control checks and supervises results.

State planning is an essential of Soviet economy. The planning system is designed to direct and coordinate the employment of the energies and resources of the country for orderly development. The planning system, however, goes beyond the economic field. It includes science, education, public health, and the extensive social services designed to safeguard the welfare and security of the citizenship. Beginning in 1939, the Soviet Government withheld publication of detailed information on industrial production, agriculture, and other phases of economic development. For prewar production figures for industry, mining, and agriculture, see 1943 YEAR BOOK. For more recent development, see below under *History*.

Foreign Trade. Foreign commerce is a governmental monopoly exercised by the Commissariat of Foreign Trade which maintains trading agencies abroad. Imports and exports are regulated in accordance with the country's system of planned economy. In 1938, the last year for which trade figures were published, imports totaled 1,422,882,000 rubles and exports 1,331,927,000 rubles, nominally equivalent to \$261,757,000 and \$250,751,000, respectively, in U.S. currency. For preceding years' trade, see YEAR BOOK for 1940, p. 751.

Finance. The accompanying table shows the expansion of the joint budget of the Union and the constituent republics during the years 1938-41. The totals include (1) receipts of the "national economy" (taxes, profits, and proceeds of loans from the national economy), (2) capital expenditure for financing the national economy, (3) taxes and proceeds of loans from the civil population, and (4) expenditure on the State administration proper. Defense appropriations in 1941 were 70.9 billion rubles. Total national income for that year was estimated at 222.4 billion rubles.

SOVIET UNION BUDGETS
[In millions of rubles]

Year	Total receipts	Loans	Expenditures	Surplus
1938	127,500	....	124,000	3,500
1939	155,900	....	153,100	2,800
1940	178,080	11,397	173,259	4,821
1941*	216,840	13,230	216,052	788

* Estimates. Figures for other years represent closed accounts.

The Soviet Government repudiated the state debt outstanding as of Jan. 28, 1918. The Soviet internal debt was estimated at 10,088,900,000 rubles on Jan. 1, 1933, and 39,800,000,000 rubles on Aug. 1, 1940. A 1942 war loan issued April 14 in the amount of 10 billion rubles was oversubscribed by 2,860,831,000 rubles within 10 days. The sum of 3,350,000,000 rubles was set aside for debt service in the 1941 budget. Nominal exchange rate of the ruble, for foreign trade valuation purposes only, was 5.3 rubles equals \$1 (1 ruble equals \$0.1887).

Transportation. Railway mileage increased from 53,700 in 1937 to an estimated 62,000 miles on Jan. 1, 1941 (including lines in Russian-annexed territories). In his speech of Sept. 30, 1942, Hitler stated that an extensive mileage of new strategic

railways had been built in German-occupied Russia and that the prewar network of railways had been repaired and largely converted to the German gage. Freight turn-over in 1940 was 409,000,000-ton-kilometers. Highways extended 1,682,000 miles in 1940. Some 65,826 miles of inland waterways are navigable. In 1940 they handled 36,000,000-ton-kilometers of freight. Two important new lines, Moscow-Irkutsk and Moscow to Alma-Ata, were added to the civil air network in 1940. The merchant marine on July 1, 1939, comprised 716 vessels of 1,315,766 gross tons.

Government. Under the Constitution of Dec. 5, 1936, supreme political power is vested in the Supreme Soviet of the U.S.S.R., meeting twice a year, and elected for a period of four years by universal direct suffrage and with secret ballot. The Communist Party, however, is the only legal political party and all candidates for elective office must have its approval. The Supreme Soviet consists of two legislative chambers with equal rights—the Council of the Union, and the Council of Nationalities. The Council of the Union has 647 members (one for each 300,000 inhabitants) and the Council of Nationalities 713 members representing the constituent republics (25 from each), autonomous republics (11 from each), autonomous oblasts (5 from each), and national okrugs (1 from each). The two chambers in joint session elect a Presidium consisting of 42 members (including a president, 16 vice-presidents, a secretary, and 24 others) with wide administrative powers between sessions of the Supreme Soviet, including ratification of treaties and declaration of a state of war. The Presidium supervises the work of the Council of the People's Commissars, selected by the Supreme Soviet, which acts as the executive and administrative organ of the State.

Joseph Stalin became general secretary of the Russian Communist Party in 1922 and after banishing Leon Trotsky in 1924 established a rigid but unofficial personal dictatorship through his control of Communist party policies. He became a member of the Presidium in 1925 and on May 6, 1941, replaced Vyacheslav Molotov as President of the Council of People's Commissars, or Premier. Molotov became Vice Premier and Foreign Commissar. On July 1, 1941, after the German invasion began, the Presidium of the Supreme Soviet, the Central Committee of the Communist party, and the Council of People's Commissars announced that all powers had been concentrated in the hands of a Committee for State Defense consisting of Stalin (chairman), Molotov (vice chairman), Marshal Klementy E. Voroshilov, L. P. Beria, Commissar for State Security; and Georgi M. Malenkov, general secretary of the Central Committee of the Communist party. On July 20 Stalin also assumed the post of Defense Commissar, formerly held by Marshal Timoshenko, and assumed direct control over the Commissariat for State Security. The elections to the Supreme Soviet scheduled for December, 1941, were postponed due to the war. See below for developments in 1943.

HISTORY

Premier Joseph Stalin in the course of his address to the Moscow Soviet on Nov. 6, 1942, on the 25th anniversary of the Soviet Revolution asked the question "whether the Anglo-Soviet-American coalition had a chance of winning the war in view of the organic defect which was capable of weakening and disintegrating the group?" The Russian Premier explained that the organic defect, to which he referred, "consisted of the heterogeneous ele-

ments with different ideologies which tended to prevent joint action against the common enemy." Stalin contended that the difference in ideologies and social systems composing the Anglo-Soviet-American coalition did not preclude the possibility and expediency of joint action against the common enemy "who holds out the threat of enslavement for them."

Premier Stalin's forecast of November, 1942, proved to be correct as the preliminary Russo-British and Russo-American agreements of May and June, 1942, respectively, paved the way for later and more extensive political and military rapprochement between the three powers. This rapprochement became more of an actuality at the conference of Secretary of State Cordell Hull, Foreign Secretary Anthony Eden, and Foreign Commissar V. M. Molotov at Moscow in October and November, and of President Franklin D. Roosevelt, Prime Minister Winston Churchill, and Premier Joseph Stalin at Tehran in December. Premier Stalin did not attend the preceding conference of President Roosevelt, Prime Minister Churchill, and Generalissimo Chiang Kai-shek at Cairo when questions concerning joint action in the Pacific were discussed. However, China's Ambassador to Russia, Foo Ping-sheung, participated in the final stages of the Moscow discussions and China announced her adherence to the decisions reached.

Passing of Comintern. Aside from the effect of the phenomenal Russian victories over the German armies there were other significant developments during the year within Russia which helped pave the way for an understanding between the Union of Socialist Soviet Republics, and capitalistic United States of America and the British Empire. Of the various developments the most important, obviously, was the action of the executive committee of the Communist International ordering a dissolution of the organization's world-wide revolutionary activities. The action, taken apparently without prior consultation with its branches scattered over the world, was designed to facilitate cooperation between Soviet Russia and her allies in the war against Germany and Italy. In a statement accompanying the dissolution order it was declared that "the forms, methods, and regulations of the Comintern had become obsolete and in some cases, had actually hindered the workers of the world in their battles against Germany."

The resolution of the executive committee was regarded by neutral observers in Moscow as an open admission that the Comintern which had stood for unification of the workers of the world under the Communist banner "should dissolve and get down to the job of beating Hitler." In explanation of the committee's action it was stated that the war situation was so critical that there was no time for a formal convention such as had been held in the past. Many observers saw in the decision one of the most significant moves on Russia's side to obtain complete cooperation with the United Nations. In both Washington and London it was felt that the decision to dissolve the International indicated a realization in Moscow of the need of eliminating factional strife among labor groups which was handicapping the production of war material and embarrassing the war effort. The concluding paragraphs of the Moscow resolution, published on May 22, 1943, were as follows:

Taking into account the growth and the political maturity of Communist parties and their leading cadres in separate countries and also having in view the fact that during the present war some sections have raised the question of the dissolution of the Communist International as the directing center of the international working class

movement, the presidium of the executive committee of the Communist International, in the circumstances of the world war not being able to convene a Congress of the Communist International, puts forward the following proposal for ratification by the sections of the Communist International:

The Communist International, as the directing center of the international working class movement, is to be dissolved, thus freeing the sections of the Communist International from their obligations arising from the statutes and resolutions of the congresses of the Communist International.

The presidium of the executive committee of the Communist International calls on all supporters of the Communist International to concentrate their energies on the whole-hearted support of and active participation in the war of liberation of the peoples and the states of the anti-F Hitlerite coalition for the speediest defeat of the deadly enemy of the working class and toilers—German Fascism and its associates and vassals.

The Moscow resolution meant, in practical effect, the passing of the Third International, which was formed as a result of an appeal by the Russian Communist Party in January, 1919. Fifty-one delegates, 31 of them plenipotentiaries, representing Communist groups in 30 countries met in Moscow on Mar. 3, 1919, and formed the Third International. At that time revolutions in Hungary, Bavaria, and Italy were brewing and it was thought that Germany was on the verge of communism.

A Second Congress called the following year was attended by 217 delegates from 41 lands. At this meeting decisions were made condemning extreme leftist tendencies and it was decided to work with parliamentary governments if necessary. Resolutions were adopted on agrarian and colonial questions, which were matters of special significance as there were present on this occasion delegates from Eastern and Far Eastern lands including China, Netherlands Indies, Persia, Korea, Turkey, and India.

The Third Congress, held in June, 1921, was attended by 605 delegates from 52 countries. A report of the meeting stated that since counter-revolutions had already begun to appear in Europe "it had become necessary for the Comintern to work out a strategy to counter the danger of attacks that European fascism would launch on the Soviet Union." The report declared that from that time onward the Comintern "was concerned less with the idea of fomenting world revolutions than with defending the interests of the workers against the still distant war and particularly of the Soviet Union, considered the true defender of the workers' interests against fascism." The statement was an indication that the Comintern, since the passing of Leon Trotsky, advocate of world revolution, had become to all intents and purposes an arm of the defense organization of the Soviet Union.

The Fourth Communist Congress was held in Moscow in 1922, shortly after Mussolini came to power. Fifty-eight countries were represented on that occasion which was the last meeting to be attended by Lenin. Since revolutions had occurred in China, Poland, Bulgaria, and Germany, after the Fourth Congress the Comintern again began to take an interest in world revolutionary affairs, particularly in the Orient. The Fifth Congress in June, 1924, was attended by representatives of 49 nations, and the Sixth Congress in 1928 was attended by delegates from 57 countries who claimed to represent 4,000,000 Communists. The Seventh and last Congress was held in 1935.

Since the anti-Comintern Pact signed by Japan and Germany in November, 1936 (later adhered to by Italy) was directed primarily against Moscow, and was later expanded into a military alliance against the United States and Great Britain prior to Pearl Harbor (see *AXIS POWERS*), it was signif-

icant that Berlin greeted the Moscow declaration dissolving the Comintern as a "Russian bluff engineered by wire-pullers in the United States and Great Britain."

While the Russian move was regarded with suspicion in many quarters, sober opinion in both the United States and Great Britain viewed the move as a clear indication of Russia's unmistakable inclination toward the "right" or purely nationalistic viewpoint in its relations with other countries, as opposed to the earlier conception of promoting world revolutions and creating puppet Communist organizations within capitalist countries.

Final step in the dissolution of the Communist International occurred in December when it was announced in Moscow that the "Internationale," the hymn of world revolution, had been displaced by a new national anthem, which glorifies "Great Russia of the Great Lenin and Stalin." The original Internationale was written by Eugene Pottier in France in 1871. The new hymn was selected in a competition of Russian artists in Moscow. (For text, see *ANTHEM*.)

Restoration of Orthodox Church. Next in significance to the dissolution of the Communist International was the restoration on September 4 of the rights and privileges of the Russian Orthodox Church and the official installation on September 12 of 78-year-old Metropolitan Sergius as Patriarch of all Russia. Sergius had remained in Russia throughout the period of the Revolution and had managed to hold the remnants of the Church together despite official prohibition and persecution.

The installation service, which had the approval of Premier Stalin, was attended by some 3,000 persons, including a considerable number of officials and men in army uniforms. The elaborate ceremony, which included the use of most of the ancient forms and elaborate ceremonial vestments, was accompanied by the lighting of thousands of candles which were placed before chosen ikons with appropriate prayers and music in the traditional manner of the Orthodox Church.

The official announcement that the Government would place no obstacles in the way of the reorganization of the Church received front page prominence in all of the Moscow newspapers on September 5. The announcement and ceremonies were preceded by conferences between Patriarch Sergius, Premier Stalin, and Foreign Commissar Molotov in the Kremlin on September 4, at which plans were discussed for the election of a permanent Patriarch of all Russia and the reestablishment of a Holy Synod of Bishops as the supreme executive council of the Russian Orthodox Church. A statement by Premier Stalin expressing sympathy with the decision to call a Congress of Bishops of the Greek Orthodox Church indicated the intention of the Soviet Government to give the Church full facilities for carrying on its work. While it was understood there would be no change in the constitutional provision which provided for freedom for both practice of religion and anti-religious propaganda, the fact that the "godless" campaign had been in abeyance for several months constituted evidence that a rapprochement between the Soviet State and the Orthodox Church had been decided upon.

It was recognized that the move also had political significance as an offset to activities of the Nazis, who had attempted to obtain the support of leaders of the Orthodox Church who emigrated from Russia at the time of the Revolution in 1917 and had remained with congregations in German-occupied territories. It was thought that the Mos-

cow action would put an end to the Hitler hypocritical crusade for the "liberation of the Russian Church." A dispatch from Moscow in *The New York Times* on July 1 stated that all prelates of the Church who had deserted since the Revolution would probably be expelled from holy orders by Patriarch Sergius at the end of the war. Belief was also expressed that the restoration of the Orthodox Church would lead to an understanding with the Vatican, and possibly a concordat permitting freedom for Catholic schools and monastic orders in Russia.

The Church of England (q.v.) sent a delegation to Russia headed by the Archbishop of York in September for the purpose of coordinating church policy of the two countries during the war and during the process of rebuilding the peace of Europe following the war.

Further evidence that the move on the part of the Government to restore the Church was a serious one was the announcement in the newly-established *Journal of the Orthodox Church and Moscow Patriarchy* that a system of religious schools would be established throughout the Soviet Union for the purpose of training priests and clerics to carry on the Orthodox religion. It was emphasized, however, that while the Government was granting every facility for the reestablishment of the Church, it would have to be on a basis of complete separation of Church and State. It also was specified that students could not enter the church training schools until they had completed the courses in the State schools.

"Anti-God" Propaganda in Abeyance. The man who, more than any other, had been responsible for anti-religious propaganda in the Soviet Union, Comrade Yemelyan Yaroslavski, died in Moscow in mid-December, his death occurring only a short time following the elaborate ceremony reestablishing the Orthodox Church which he had labored so long to eliminate. Yaroslavski was a faithful old-time Bolshevik who was highly regarded for his single-minded honesty of purpose in striving to uproot from the minds of the people all thoughts of the old wealthy, once dominant and politically corrupt church which had served to bolster up the decadent Czarist empire. The Soviet Government did its part by confiscating most of the property of the old Orthodox Church while Comrade Yaroslavski, using the slogan "Religion is the Opium of the People," attempted to uproot its influence from the minds of the populace in accordance with the atheistic concepts of Marxian socialism.

But while the "anti-God" literature was widely read and "anti-God" slogans were to be seen on all sides, he was not successful in eliminating religion from the minds of the people, even the younger generations who had been brought up under the influence of communist teachings. Thoughts of religion always become more pronounced in time of war, particularly the type of war of survival which has prevailed along the Russo-German fronts which has afflicted every man, woman, and child in the land. Many of the people still attended church even though the front doors and windows were boarded up and it was necessary to slip in through the back door, or in cases where the church had been destroyed, to seek out some humble structure on a side street or alleyway where a faithful priest still held forth despite the ridicule of the anti-God propagandists.

The way for the reestablishment of the Orthodox Church was paved dramatically by the aged Patriarch Sergius, who demonstrated the patriotism of the Church by raising substantial funds for the

Russian war effort, the donation taking the practical form of purchase of a tank unit. The action took place long before the Government's decision to permit reestablishment of the Church became known.

Since there had been severe foreign criticism of the Soviet leaders on the score of their anti-religious policies, a report concerning the granting of religious freedom to the Poles aroused deep interest in the United States. President Roosevelt, at a press conference at the White House in May, 1943, referred to the Moscow report and stated that the "status of religion in Russia was the same as in the United States." He then referred to Article 124 in the Russian Constitution which reads, "Freedom of religious worship and freedom of anti-religious propaganda is recognized for all citizens."

Religious Freedom in Russia. The President's statement aroused considerable controversy due to the knowledge that the Russian Constitution was still in the "paper document" stage and that even the clause referring to freedom of religion was written in such a way as to give the impression of granting freedom of religion in theory while at the same time openly permitting and encouraging anti-religious propaganda under official auspices. As a result of the discussion stirred up by the President's statement, it was brought out that the American "Lend Lease" emissary in Moscow, Averill Harriman, had been trying to "persuade" Stalin to change his attitude on religion. It was indicated that the Russian attitude on religion constituted a strong and almost insuperable bar to a full rapprochement between the United States and the Soviet Union.

According to an article in *The New York Times* on May 27 the belief prevailed that the officially sanctioned trip of Archbishop Francis J. Spellman of New York to Europe, Africa, and the Near East, had as one of its objectives the restoration of normal relations between Soviet Russia and the Vatican. It was regarded as significant that the Vatican had held special ceremonies following Archbishop Spellman's visit "to hasten Russia's return to the true faith," the occasion being the 300th anniversary of the sainthood of the Russian martyr, St. Josaphat.

It also was announced that the Vatican radio had inaugurated broadcasts in the Russian language, the first program stressing the value of prayer and characterizing the war as "probably history's greatest punishment for the world . . . entire peoples have become over-proud . . . when people abandon religion and honesty, disorder begins." The Vatican announcement stated the Russian broadcasts would continue and would include general religious themes and religious news relating to the Soviet Union.

Normalcy in Foreign Service and Army. Other developments in the Soviet Union indicative of the trend toward traditionalism in form and, in consequence, bringing the country into more definite accord with the western world, included significant changes in both Army and Diplomatic Services. In accordance with an order published in June, all diplomatic officials from ambassadors to attachés were to be attired in formal uniforms such as had not been worn by representatives of Russia since the days of the Czars. Similar uniforms were also decreed for all members of the newly-established career diplomatic service connected with the Foreign Commissariat in Moscow. The new career diplomatic service was to have 11 ranks ranging from ambassador to attaché, amounting to the creation of a hierarchy and permanent civil service in the diplomatic branch. Previously the diplomatic branch, like the



Sovfoto

BEGINNING OF THE LONG RETREAT FROM RUSSIA

Above: Nazi generals who surrendered in the debacle around Stalingrad. Left: A German rocket gun captured with other abandoned equipment. Right: German dead in the streets of a recaptured Ukrainian village.



THE TASK OF REBUILDING

The Russians return to devastated homes and industries in their reconquered territory. Above: A street in Kharkov after the German retreat (Sovfoto). Right: The lone inhabitants of a small village who remain to greet the returning Red Army (U.N.I.O.). Below: The ruins of the Kharkov tractor plant (Sovfoto).



officers' group in the Army, was staffed largely by men who did patriotic service in the Revolution or had served the Party faithfully since.

The change in organization of the Red Army was equally pronounced. Originally it was almost impossible to distinguish an officer from a private as the uniforms were practically similar and there was no class distinction between officers and men. The exigencies of war made it necessary to introduce rigid discipline in the Army and restore the old-time officer ranks up to that of Field Marshal, which was held by the commander-in-chief, Premier Stalin himself. The Army was now headed by an elite Guard as of old and special officer schools were inaugurated. The decree of Oct. 10, 1942, curtailing the powers of the so-called political commissars in the Army was strengthened in 1943 by the total abolition of the Commissars and substitution of political workers or teachers subject to orders of Red Army officers. The new officer training schools, nine in number and known as the Suvoroff Schools, admitted boys from 8 to 17 and were boarding schools similar to those before the Revolution. They were maintained at State expense and priority was given to the sons of officers.

Back to Nationalism. These developments indicated a definite trend away from the doctrines symbolized by the fellow-traveler attired in a worker's shirt which had characterized the country since the Revolution. Perhaps of even more significance was the gradual emergence of the membership of the Communist party, now numbering some 4,000,000, as the new ruling "white collar" aristocracy of the country. Attention has been called to the interesting coincidence that membership in the Party corresponds roughly to the number of the old intelligentsia or ruling class which emigrated from the country as a result of the 1917 Revolution.

There were indications of the development of a "new capitalism" within the socialistic framework as evidenced in purchases of war bonds of respectable amounts by individuals and groups since the beginning of the struggle with Germany. Many of the heaviest contributions to war bonds came from the directors of collective farms, who benefited materially from the war effort. The inauguration of piece work in the state-owned factories and mines several years before did much to stimulate production for peace as well as war and also established the principle of differentiation in pay and income among both factory workers and farmers. A Moscow report in June stated that outstanding farmers and workers were permitted to maintain private homesteads, whereas earlier practices of Russian communism forbade the ownership of private property with the exception of personal belongings.

The London *Economist*, well informed on economic conditions in Russia, said there was evidence of "very large savings among collectivized peasants." The article continued:

There can be little doubt that the war has accelerated the reemergence of high-income groups among the collectivized peasantry. It has not been possible to gauge the extent of this significant development, nor to form any opinion about the degree to which the high-income groups in the countryside have crystallized into anything like solid social layers.

Judged by the wages paid in a number of big metal factories, the lower categories of earnings have been of the order of 300 rubles a month. Some 8 to 12 per cent of the workers in those factories earn more than 1,200 rubles, whereas the earnings of some Stakhanovites (highly productive workers) amount to more than 4,000 rubles. The salaries of the technical staff in the same group of factories vary from 1,000 to 5,000, 6,000, and more rubles.

The influential Moscow Communist labor publication, *War and the Working Classes*, published editorials in the closing weeks of the year severely criticizing labor union officials in the United States and Great Britain "who incited strikers and mislead workers into unpatriotic acts which impeded the war effort."

The January, 1943, issue of *International Conciliation*, organ of the Carnegie Endowment for International Peace, published a compilation of documents indicating that the Soviet Union "may now be considered to have abandoned its original aim of world revolution."

Co-education Discontinued. There was a further revolutionary development on July 16, 1943, when the government issued a decree introducing separate education for boys and girls in the high schools of large cities and industrial centers. Co-education was continued temporarily in the primary schools and in rural districts where the number of students does not justify a separation of the sexes. The new order went into effect at the opening of the school year on September 1.

The announcement aroused widespread interest due to the insistence of Party authorities from the beginning of the Revolution in 1917 upon the absolute equality of the sexes even to the extent of military service.

The real incentive for the change was revealed later in the discussion when it was stated that tests carried out in the Moscow schools in 1942 indicated that in the higher grades (fifth to tenth) "separate education had resulted in a higher level of military and physical training and a better order of school life and better discipline."

Dispatches from the Moscow correspondents stating that it was decided to adopt different educational programs for boys and girls during 1944, the secondary education for boys specializing on technical subjects so that on leaving school the boys would know how to repair simple electrical installations and household articles and read maps, while the girls would be trained in pedagogy, handicrafts, domestic science, personal hygiene, and care of children. More attention was also to be paid to Russian history and classical literature. The Government on December 28 ordered the starting age for compulsory education reduced from eight to seven years.

Reconstruction. The Council of People's Commissars and the Central Committee of the Communist Party published on August 22 the text of a comprehensive reconstruction program, much of which related to emergency rebuilding of liberated areas. The plan provided for the immediate return of 200,000 cattle, 350,000 sheep and goats, and 55,000 horses to certain liberated areas of both north and south Russia. It called for the reconstruction of tractor stations, accumulation of gasoline supplies and replacements, restoration of railways, railway stations and other emergency railway buildings as well as barracks for railway workers, and the building of apartments and houses for the returning population, particularly for those living in dugouts and ruined buildings. The Government urged the use of reclaimed building materials and other materials to be found on the spot. The Army was instructed to supervise the reconstruction program so that the work could be speeded up and to avoid burdening the rest of the country.

An idea of the extent of the reconstruction necessary and its urgency was provided in a report of foreign correspondents who visited Kharkov following its deliverance by the Red Army after two German occupations. Once a bustling industrial

city of 925,000 people, it now had a population of 300,000. It was estimated that 50 per cent of the buildings were unsuitable for occupancy and 20 per cent of the remainder required capital repairs. Of the city's 430 prewar large and medium factories, previously employing 300,000 people, not one was in operation. The gas and water systems had been destroyed and the electric plant was only able to serve part of the city. Of the 135 schools, 72 had been destroyed and only ten of the previous 27 hospitals remained. Before the war Kharkov had 16 street car routes all of which were torn up by the Germans. Two or three lines had since been restored.

Of the original population, a considerable number had been evacuated along with factory machinery and materials to the Urals. Thousands of others had fled before the German advance leaving about 450,000 in the city at the time of the Nazi occupation. Of these some 100,000 died of disease and starvation, another 100,000 laborers were sent to Germany and some 30,000 Jews were executed.

Conditions in another city, Orel, were similar on a somewhat smaller scale. Orel was under German occupation for 22 months. Of the original population of 114,000 only 30,000 were there when the Soviet Army returned. About 10,000 had fled before the German arrival in October, 1941. Of those remaining some 12,000 of the civilian population were killed by the Germans and about 14,000 sent to Germany to work. Of those left, numbering about 75,000, large numbers died, were evacuated or escaped to other parts of the country. The 30,000 who remained were forced to live in cellars where they subsisted on a half pound of bread daily.

A sidelight on the serious labor problem involved in the reconstruction program was provided in a report in April stating that much of the work would fall on women. This was particularly true in agriculture where 14,000 collective farms were headed by women with more than 40,000 women section superintendents. It was stated that some 2,000,000 women had received special agricultural training in preparation for reconstruction of farming areas. Much of the farm machinery and seed grain in the occupied areas which had been buried by the farmers to prevent seizure by the Germans, could be salvaged, stated the report.

A survey of agricultural conditions published in the journal *Socialist Agriculture* in June stated that the country was still suffering from the poor crops of 1942 and the deficiency resulting from the German occupation of the Ukraine and Caucasus where most of the crops had been destroyed. Despite the extensive use of women labor the shortage of man power was felt throughout the agricultural areas. It was admitted that women could not operate the tractors and other machinery with the efficiency of the men who had been technically trained for the purpose.

Some idea of the reconstruction problem in Russia's industrial areas which were liberated in the middle and latter half of 1943 was provided in published statistics showing that the liberated Donbas area before the war produced 88,000,000 tons of high grade coal or about 54 per cent of the country's total. Only a few of the smaller mines in the district had been restored. Most serious are the problems involved in reconstructing the industries of Kharkov, Mariupol and other liberated Ukrainian areas as well as the engineering works in the Bryansk district. In most cases even the buildings had been razed. Among the important industries which were wrecked are the great locomotive works at Voroshilovgrad, the tractor and

machine tool works at Kharkov, farm machinery plants at Osipenko on the Sea of Azov, and various important engineering plants in Novorossiisk. The Russians had recovered from the Germans up to the end of the year most of their major industries excepting the manganese and iron ore areas of Nikopol and Krivoi Rog. In recapturing Orel and Kursk Provinces the Russians had regained much of their richest farming land, including tobacco and beet sugar districts. However, most of the tobacco curing plants and sugar refineries in the district had been destroyed by the Germans.

The Government announced on July 7 that a new oil field had been discovered in Azerbaijan which was expected to become second to the famous Baku fields.

Ural Plants Saved Country. The fact that the country was able to survive the Nazi occupation of its most developed agricultural terrain and industrialized cities was attributed to the Government's foresight in developing alternative industrial centers in the Urals and beyond, even in the Lake Baikal district of Siberia. Had it not been for these subsidiary industrial bases the German occupation of the Ukraine and Donbas might have been fatal.

Adm. William H. Standley, U.S. Ambassador to Russia, made a tour of the Ural industrial areas in July and testified to the effective work which was being done. He inspected three of the country's largest industries, located in the Ural area, two producing tanks and the third steel. One plant produced almost everything going into a tank from guns to rubber. He said that the steel plant compared favorably with plants in the United States. He also reported seeing large fields of potatoes and other crops located on State farms in the Ural area. The Ambassador visited the well-known industrial cities of Sverdlovsk, Chelyabinsk, and Magnitogorsk while on the trip. It was reported at the time that two new open-hearth furnaces and a steel rolling mill had been opened in the Ural area, the furnaces being located at Nizhni, Saldinsk, and Novo Tagil and the steel mill at Kuznetsk.

Ural-Siberian Boom. The shifting of population and industries to the Ural and Western Siberian areas produced a boom, the like of which had never before been experienced in the Soviet Union, according to accounts in the Moscow papers. Emelyan Yaroslavsky, well-known Communist writer, attributed the prosperity now prevailing on Russia's undeveloped frontier to Stalin's long-range planning but regardless of the reason, his figures were significant. Production had increased three-fold since the outbreak of the war, while some factories had increased their production as much as seven and a half times in the same period. The expansion at the industrial town of Nizhni Tagil was 300 per cent according to the Soviet writer. The heavy metallurgical center in the North Urals presented a thrilling picture with great new buildings dwarfing the old ones. The loss of Krivoi Rog in the Ukraine and the Donetz Basin were responsible for the new prosperity in the Urals. The writer urged the Government to take steps to adjust the social and cultural life of the increased population, "otherwise a serious social problem would develop." He said that serious problems of housing, transport, and electric power had developed at such cities as Molotoff, Sverdlovsk, Chelyabinsk, Zlatoust, Magnitogorsk, Serov, and other centers of swollen populations.

It was claimed that nowhere else in the world had nature been so bountiful as in the 2,500-mile-long "spine" of the Urals where immense supplies of minerals were being developed including iron

ore, copper, nickel, chrome, manganese, magnesium salts, bauxite, asbestos, graphite, coal, and oil.

The industries in the Ural district reported an increase in production for 1943 of more than 50 per cent over 1942, according to a year end report to Premier Stalin by 1,605,152 workers and residents of the Sverdlovsk district. The workers promised a further 20 per cent increase in production for 1944. Among the details was an account of one girl who turned out 300,000 shells above the quota. In the Sverdlovsk district the capital investment was increased 1,500,000,000 rubles in 1943. Ten open-hearth furnaces, four mines, and two coke batteries were built. There also was large scale housing construction. One collective farm produced 540,000 pounds of corn, and 1,116,000 pounds of potatoes, and reported it had sent many cows, sheep, and pigs to liberated areas.

Little has been said about developments in Siberia, possibly because of a fear of stirring up the Japanese, but it was known that industrial development in that area, even at Sakhalin and Kamchatka, was also taking place. There was a report in April that Moscow was sending colonists to northern Sakhalin and that one of the new industries to be established was a stock farm. Northern Sakhalin produced large quantities of oil, practically all of which was sold under contract to the Japanese Navy.

A report in the business sections of the New York papers early in the year told of the first auction sale of Russian Siberian furs to be held in New York in many years. Nothing was said about how the furs were transported to the United States but it was suggested they had arrived by the new Soviet steamship line connecting Portland and Vladivostok or possibly by air express over the new air line operating across Bering Sea from Alaska to Siberia. Both governments maintained secrecy about the new air service, which following the war was expected to become one of the world's leading air routes. A report from Edmonton, western Canada, at the southern end of the new Alaskan Highway stated that Russian pilots, including women, were to be seen along the highway piloting transport planes carrying lend-lease goods in both directions across Bering Strait.

U.S.S.R. and U.S.A. in the Far East. The Cairo and Tehran Conferences and the progress of the war against Japan in the Pacific tended to bring into prominence numerous questions involving the future relations of the United States and the Soviet Union in the Far East. While Japan and Russia continued their policy of neutrality, events in the final months of 1943 indicated that important changes might be in prospect. The decision reached at Cairo to strip Japan of her colonies was of vital interest to Russia as two of these territories, Manchuria and Korea, adjoin Russian Siberia in the Far East. The restoration of Manchuria to China would also bring into prominence the question of Russian interests in Mongolia and Sinkiang, both of which territories also adjoin the Soviet Union. Russia has extensive economic interests in all of these Far Eastern territories.

Walter Duranty, recognized authority on the Soviet Union, in an article written for the North American Newspaper Alliance (see the *New York Times*, Feb. 7, 1943) suggested the possibility that in the final settlement of war issues Russia might be more deeply concerned with developments in Asia than in Europe. Duranty suggested that the Soviet Union might want "an independent Soviet Republic of Manchuria, a similar republic of Korea and even perhaps the northwestern Chinese

Soviet Republic of Sinkiang, . . . and last but not least, Russia wants the Liaotung Peninsula of South Manchuria, the lost fortress of Port Arthur and the Port of Dalny (Darien). . . . That is what the Russians want, the control of the West Pacific, that is, the China Coast . . . the Russians are going to build up there in the Burry River Basin north of Blagoveshchensk a new and bigger steel town, a second Pittsburgh, and, with Port Arthur and Dalny the Russians will rule Northwestern Asia."

In view of these traditional Russian leanings toward the Far East, Duranty declared that "as soon as German pressure upon the Soviet Union had been reduced below the danger point to the Soviet Union, and as soon as the United States is able to put a powerful force of airplanes—1,000 or more frontline planes—with ground crews, high octane gas and equipment of various kinds into the Pacific Maritime Province, that is Vladivostok, then the Russians will cooperate in our death stroke against Japan."

Maurice Hindus, another authority on Russia, expressed similar views (*New York Herald-Tribune*, Feb. 12, 1943) concerning Russia's interest in Asia. "It should," he wrote, "be kept in mind that Russia is the most powerful nation in Asia . . . Not even Japan can now match the heavy and machine-building industry which Russia possesses in the Urals, Siberia and in Central Asia."

See BRAZIL, BULGARIA, CANADA, CHILE, CHINA, COLOMBIA, CZECHOSLOVAKIA, EGYPT, FINLAND, FRANCE, GERMANY, GREAT BRITAIN, HUNGARY, ICELAND, IRAN, ITALY, JAPAN, LITHUANIA, MEXICO, POLAND, RUMANIA, SPAIN, SWEDEN, SWITZERLAND, TURKEY, YUGOSLOVIA, under *History*; AERONAUTICS; ASBESTOS; CHEMISTRY under *Foreign*; FOOD INDUSTRY; LABOR CONDITIONS; LEND-LEASE PROGRAM; NAVAL PROGRESS; REFUGEES; THEATER; UNITED NATIONS; WORLD WAR under *The Russian Front*.

JOHN B. POWELL.

UNIONS. See LABOR CONDITIONS, especially under *Labor Movements*, *Collective Bargaining*, and *Strikes*.

UNITAS. See POSTWAR PLANNING under *International*.

UNITED KINGDOM COMMERCIAL CORPORATION. A commercial agency, established by the British Government in April, 1940, to counter German economic penetration into the Balkans and South-eastern Europe. It functions as an independent entity, although financed by the Government and subject to Government control over the broad lines of its policy. Originally it was designed to assist British traders to compete more effectively with the German methods of using investment and trade as instruments for the extension of political control. However the German occupation of the Balkans in the spring of 1941 and the critical position of the British cause throughout the Middle East forced the Corporation greatly to broaden its powers and functions and enter upon vast operations wholly beyond the scope or ability of private enterprise.

Its first great undertaking was to enable Turkey to withstand German economic pressure. Assuming control of all British trade with Turkey (except in chromite and tobacco), the Corporation supplied the Turks with essential imports and made large-scale purchases of export surpluses. This action helped to maintain the Anglo-Turkish alliance and sustain Turkish neutrality during the most critical period of the war. In 1942 Turkish imports from the sterling area were four times those obtained

from the United Kingdom in 1938. The Corporation thus averted a disastrous setback to Turkish foreign trade. It also provided new export markets for British goods in Turkey, guaranteed sale of the goods through Treasury backing, and organized the shipping in which the goods were moved. The Corporation's purchases in Turkey between March, 1941, and September, 1942, totaled some £9,000,000, while its sales of goods from the sterling area during the same period were £8,500,000. See *TURKEY under History*.

Meanwhile the Corporation had assumed vast new responsibilities. It became the executive agent of the Middle East Supply Center (which see). In this capacity it gradually developed into a universal source of supply and a clearinghouse for surplus products of the countries and colonies throughout that region. Within two weeks after the German invasion of Russia, the Corporation was assigned the task of supplying Russia with all civilian requirements from the sterling area. In addition it undertook to accumulate reserve stocks of strategic supplies for the British Government, to execute bulk sales and purchases abroad wherever this was deemed necessary to implement the Government's policies, and to facilitate the British export trade in other ways consistent with the nation's war interests.

After America entered the war, the U.S. Government became a co-member of the Middle East Supply Center and established the U.S. Commercial Corporation, modeled after the UKCC, to perform similar functions. Thereafter the two Corporations worked closely together, through their London and New York headquarters and in the field. In collaboration with the Lend-Lease Administration and other British and American war agencies, they carried out the Middle East Supply Center's plans for conserving shipping, countering Axis politico-economic warfare, and developing that region as a supply base for Allied armies. In Turkey, Portugal, and Spain they coordinated Anglo-American sales and purchases in support of their governments' diplomatic aims and in order to deprive the Axis of Turkish chrome, Portuguese tungsten, and other strategic materials. As agents of their respective governments, they supported the economies of the Fighting French and Belgian colonies in West Africa, and helped to sustain the trade of the French North African colonies after the Anglo-American landings of Nov. 8, 1942.

In supplying Russia's civilian requirements from the sterling area, the UKCC played a leading part in organizing the transportation of supplies across Iran to the Soviet Union. It operated the railway-highway route from Karachi, India, to Caspian Sea ports via Meshed, and all motor transport services from the Persian Gulf ports of Bushire and Andimeshk. The Corporation trained 8,000 Iranians to maintain and operate the thousands of trucks used in these services. Its agents in India, Ceylon, and other Middle Eastern territories purchased thousands of tons of rubber, jute, graphite, tea, etc., for shipment to the Russians. This great supply job was carried on under the direction of the Allied Supplies Executive and in cooperation with the Soviet Trade Delegation in London.

The Corporation achieved its most important and permanent results in carrying out the economic plans of the Middle East Supply Center. It intervened successfully to avert the threat of famine and spreading economic chaos arising from the war, drought, and locust plagues. This was done by conserving shipping space for foodstuffs and other essential supplies, by bulk purchases in East

Africa and other regions of surplus food production for resale in deficiency areas, and by encouraging production by assuring markets at profitable prices. The Corporation provided raw materials and equipment for the expansion of manufacturing production, especially in Palestine, and found markets for the resulting articles. Tanning materials from Turkey and surplus hides from East Africa and the Sudan were shipped to Iran and Palestine for use by leather factories working on UKCC contracts for boots for the Russian and Turkish armies. With UKCC financial and technical aid, plants were erected in various parts of the Middle East which eliminated the need for imported fertilizer, batteries, margarine, etc.

The success achieved by these large-scale, integrated commercial operations in meeting the economic needs of the Middle Eastern countries and opening new fields for British trade and investment, led the President of the Board of Trade to assure Parliament early in 1943 that the UKCC's operations would be continued after the war. Acting chairman in 1943, Sir Francis Joseph. See *IRAN* and *PALESTINE under History*.

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND. See *GREAT BRITAIN*; *IRELAND*, *NORTHERN*.

UNITED MINE WORKERS (U.M.W.). See *COAL*; *LABOR CONDITIONS under Labor Movements*; *NATIONAL WAR LABOR BOARD*.

UNITED NATIONS. A coalition of nations engaged in war with Germany, Japan and the lesser Axis states. Twenty-six nations signed the original Declaration of solidarity and unity of purpose at Washington on Jan. 1, 1942 (for text of the Declaration and steps antecedent thereto, see 1943 YEAR BOOK, pp. 703-4), and Ethiopia, Mexico, and the Philippines signed the Declaration later in the year. In 1943, the total rose to 33 by the signatures of Iraq (January 16), Brazil (February 8), Bolivia (May 5), and Iran (September 10).

Though widely hailed as the nucleus out of which general and permanent postwar organization would develop, the United Nations Declaration failed to produce any organization of machinery during 1942. The year 1943 saw a slow but gratifying development of United Nations Conferences, a first working United Nations organization, and tentative agreements to hold further conferences on specific subjects. Even more important was the assurance contained in the Declaration of Moscow (see text later in this article) that the four signatory states were determined to establish after the war a general international organization for the maintenance of international peace and security. While membership would not necessarily be limited to the United Nations, in practice it would be initially a United Nations organization.

UNITED NATIONS CONFERENCES

Food and Agricultural Production. The first United Nations conference of any kind dealt with long-range and postwar problems of food production, marketing, and nutritional standards. With the United States as host it held sessions at Hot Springs, Virginia, from May 18 to June 3, 1943. Among categories of questions considered were: (1) plans of various countries regarding production, import requirements, or exportable surpluses of foodstuffs, (2) possibilities of international action to improve national policies concerning consumption and nutrition, (3) possibilities of establishing international agreements and institutions to pro-

mote efficient production and an equitable distribution of food supplies and other agricultural products, and (4) necessary commercial and financial arrangements to enable countries to obtain needed agricultural products and to maintain adequate markets for their own surpluses.

The conference was attended by delegations from all the United Nations and from all the states associated with them (i.e., those which had severed diplomatic relations with the Axis but which had not declared war), a total of 44 in all, including representatives of the French National Committee.

A general harmony of views prevailed throughout the conference sessions. A final act was adopted, containing a general declaration and 32 specific resolutions dealing with virtually all aspects of the classes of problems listed above. (For text, see the Department of State *Bulletin*, Vol. VIII, No. 208, June 19, 1943 or *International Conciliation*, No. 392, September, 1943.)

The Interim Food Commission. Probably the most important act of the Hot Springs Conference was the establishment of an Interim Commission, with one representative from each participating government or authority, to prepare and recommend to the constituent governments for adoption (1) a formal international declaration or agreement whereby each signatory would obligate itself to carry out the policies agreed upon at the conference, and (2) a specific plan for a permanent international organization in the field of food and other agricultural production and distribution. This Interim Commission was established in Washington where it began active work on this dual assignment.

United Nations Relief and Rehabilitation Administration. More urgent was the problem of providing relief and rehabilitation measures for the civilian populations to be freed from Axis rule. A United States agency for this work had already been created (see RELIEF AND REHABILITATION), and the next step was to secure a United Nations agreement establishing an international agency to organize the administration of relief on a world-wide basis. During the summer of 1943 agreement on the constitution of such an agency was reached, and the signatures of the 44 United Nations and their associates were affixed at a ceremony in the White House on November 9. Thereafter, the delegates adjourned to Atlantic City where they remained in conference until the end of the month developing plans for the financing of relief and creating further machinery for its administration.

As a result of the UNRRA agreement and the decisions reached by the Atlantic City conference, the administrative mechanism of this new United Nations agency was projected as follows. The governing body, called the Council, consists of one representative of each member state. It is to meet at least twice a year in regular session and may be convoked for special purposes whenever necessary. Decisions are normally to be made by majority vote. Representatives of the United States, Great Britain, the Soviet Union, and China are to constitute a guiding Central Committee to take emergency decisions, to call special sessions of the Council, etc. The third important part of the organization is the Director General who as chief administrative officer is to be appointed by the Council on recommendation of the Central Committee. He presides over sessions of the Central Committee but may not vote.

Herbert H. Lehman, former Governor of New York, was appointed as the first Director General of the new organization. Four working committees—

the Committee on Supplies, the Committee on Financial Control, the Committee for Europe, and the Committee for the Far East—were established. It is interesting to note that while the Council may amend most portions of the UNRRA agreement by a two-thirds vote, it can change those dealing with the composition of the Council and the position of the Director General only if favorable votes are cast by all members of the Central Committee. (For text of the UNRRA agreement, see Department of State *Bulletin*, Vol. IX, No. 222, Sept. 25, 1943, or *International Conciliation*, No. 392, September, 1943.)

CONFERENCES OF PRINCIPAL UNITED NATIONS

More numerous, more dramatic, and of more immediate political and military significance were the meetings between high officials of the leading United Nations for the purpose of furthering the joint war effort and of establishing a basis of agreement for the peace settlements to follow. As the year went on, these meetings increased in frequency and in the significance of their accomplishments. It seemed as if a firm basis for future collaboration were in process of establishment. Of special importance in this connection was the growing willingness of the highest officials of the Soviet Union to join their British and American colleagues in these meetings.

The Casablanca Conference. From January 14–26 President Roosevelt and Prime Minister Churchill conferred at Casablanca, French Morocco. As the conference was predominantly a military affair, both men were accompanied by their highest military advisers and experts. Thus, the United States delegation included Gen. George C. Marshall, Adm. Ernest J. King, Lt. Gen. H. H. Arnold, Lt. Gen. B. B. Somervell, and many others. The British officials were the late Adm. Sir Dudley Pound, Gen. Sir Alan Brooke, Air Chief Marshal Sir Charles Portal, Field Marshal Sir John Dill, Adm. Lord Louis Mountbatten, Lt. Gen. Sir Hastings Ismay, and numerous other officers. Among civilian officials accompanying President Roosevelt were Harry Hopkins, chairman of the British-American Munitions Assignment Board, and W. Averill Harriman, then U.S. Defense Expediter in England. Lord Leathers, British Minister of War Transport, accompanied Mr. Churchill. The final communiqué of the conference made it clear that Premier Stalin had been invited to attend the meeting, and that both he and Generalissimo Chiang Kai-shek had been fully apprised of the decisions taken.

Apart from military decisions, to which, naturally, no publicity was given, the chief result of the conference was the agreement reached by President Roosevelt and Mr. Churchill that the war against the Axis states would be terminated only on the basis of "unconditional surrender" by the latter. Peace was subsequently made with Italy on this basis, and the Soviet Union adopted the principle with respect to the surrender of Germany when it became a party to the Moscow Declaration. The term apparently meant that surrender would not be a result of a bargaining process, but that the defeated state must throw itself completely upon the mercy of the victors, agreeing to comply with whatever conditions and terms the latter might subsequently determine and impose.

The Quebec Conference. Prime Minister Churchill (who had conferred at the White House with the President in May) and President Roosevelt met at Hyde Park in August to continue their discussions. Together with substantially the same military advisers and staffs as had attended the Casablanca

Conference, they then adjourned to Quebec where from August 11-24 they renewed their examination of war plans. The added presence of Secretary of State Hull and Foreign Secretary Eden indicated that political as well as military matters were under discussion. As the host to the conference, Prime Minister W. L. Mackenzie King took an active part in the deliberations. The joint communiqué stated that much of the military discussion had turned upon the war against Japan, and that Dr. T. V. Soong, as the representative of Generalissimo Chiang Kai-shek, had participated in the talks. Following the end of the Quebec conference, Mr. Churchill returned with the President to Washington for further discussions.

The political results of the Quebec Conference were foreshadowed by the final sentence of the communiqué which stated that consideration had been given to the question of relations with the French Committee of National Liberation, and that an announcement by a number of governments soon would be made. On August 26, the White House released the promised statement of American policy and the British Government made a similar, though rather less reserved, statement (see FRANCE and GREAT BRITAIN under *History*).

The Moscow Conference. The increasingly close cooperation between British and American officials, manifested at these conferences and by the repeated Washington visits of Prime Minister Churchill, had not yet been accompanied by the development of the same collaboration with Soviet officials, and there was some popular apprehension in Britain and America lest Premier Stalin and his advisers had determined to go their own way in waging war and in making peace. This atmosphere was improved measurably when it became known that the three foreign ministers, Hull, Eden, and Molotov, had agreed to confer in Moscow. This meeting, which took place from October 19-30, was primarily political in character although each government had a high military official in its delegation.

The American representatives, headed by Secretary Hull, included W. Averill Harriman, recently appointed Ambassador to the Soviet Union, Maj. Gen. John R. Deane, Green H. Hackworth, Legal Adviser to the Department, James C. Dunn, Political Adviser on European Affairs, and a number of other officers of the Department to serve as experts. The British delegation consisted of Anthony Eden, Ambassador Sir Archibald Clark Kerr, William Strang, Lt. Gen. Sir Hastings Ismay, and a staff of experts. The Russian participants included V. M. Molotov, Marshal K. E. Voroshilov, A. Y. Vyshinski, Maxim Litvinov, and expert advisers.

Four Declarations of fundamental importance were agreed upon at the conference. The first of these, the Declaration on General Security, is such an epoch-making document that it is reproduced textually herewith:

The Governments of the United States of America, the United Kingdom, the Soviet Union, and China:

united in their determination, in accordance with the Declaration by the United Nations of Jan. 1, 1942, and subsequent declarations, to continue hostilities against those Axis powers with which they respectively are at war until such powers have laid down their arms on the basis of unconditional surrender;

conscious of their responsibility to secure the liberation of themselves and the peoples allied with them from the menace of aggression;

recognizing the necessity of ensuring a rapid and orderly transition from war to peace and of establishing and maintaining international peace and security with the least diversion of the world's human and economic resources for armaments;

jointly declare:

1. That their united action, pledged for the prosecution of the war against their respective enemies, will be con-

tinued for the organization and maintenance of peace and security.

2. That those of them at war with a common enemy will act together in all matters relating to the surrender and disarmament of that enemy.

3. That they will take all measures deemed by them to be necessary to provide against any violation of the terms imposed upon the enemy.

4. That they recognize the necessity of establishing at the earliest practicable date a general international organization, based on the principle of the sovereign equality of all peace-loving states, and open to membership by all such states, large and small, for the maintenance of international peace and security.

5. That for the purpose of maintaining international peace and security pending the reestablishment of law and order and the inauguration of a system of general security, they will consult with one another and as occasion requires with other members of the United Nations with a view to joint action on behalf of the community of nations.

6. That after the termination of hostilities they will not employ their military forces within the territories of other states except for the purposes envisaged in this declaration and after joint consultation.

7. That they will confer and cooperate with one another and with other members of the United Nations to bring about a practicable general agreement with respect to the regulation of armaments in the postwar period.

V. MOLOTOV
ANTHONY EDEN
CORDELL HULL
FOO PING-SHEUNG

Moscow,
30th October, 1943

It will be noted that although the Chinese did not take an active part in the conference—which was natural in view of the fact that Russia was not at war with Japan—they were invited to become co-signatories of this momentous declaration. Also, of special significance is the self-denying ordinance in Point 6 by which each state agreed to a drastic limitation of the use of its military, naval, and air forces in the postwar period. This was apparently designed to give special assurance to all small neighboring states who might otherwise have feared that these powerful states, possessing a near-monopoly of the world's military power at the end of the war, might use that power to establish an unpalatable world hegemony.

Declaration Regarding Italy. The second Moscow Declaration dealt with the policy of the three states toward Italy. After laying down the general principle that "Fascism and all its evil influences and emanations should be utterly destroyed and that the Italian people should be given every opportunity to establish governmental and other institutions based on democratic principles," the agreement went on to state that (1) the Italian Government should be made more democratic by the inclusion of anti-fascist elements, (2) freedom of speech, worship, political belief, the press, and public meeting should be restored, (3) institutions and organizations of the Fascist regime should be suppressed, Fascist elements removed from all public institutions and organizations, political prisoners of the Fascist regime released, and Fascist chiefs and other persons known to be war criminals arrested. Finally, the right of the Italian people ultimately to choose their own form of government was affirmed. (The texts of all the Moscow declarations may be found in the Department of State *Bulletin*, Vol. IX, No. 228, Nov. 6, 1943).

Declaration on Austria. The third Moscow declaration stated the policy of the three powers toward the future of Austria. The annexation to Germany of March, 1938, was declared to be null and void, and the powers promised that they would liberate Austria so that it could be reestablished as a free and independent state. Much speculation was aroused by the additional statement that this step would "open the way for the Austrian people themselves, as well as those neighboring states which will be faced with similar problems, to find that political and economic security which is the

only basis for lasting peace." No official explanation was given as to the reason for this reference to other states.

Declaration on German Atrocities. The first three documents were the product of the meeting of the three foreign secretaries. The fourth document, though issued at the conference, was signed by President Roosevelt, Prime Minister Churchill, and Premier Stalin. It gave a solemn warning that at the time of the granting of any armistice to Germany, German officers and men, and Nazi party members, who had been responsible for the atrocities perpetrated upon the peoples of the occupied countries, would "be sent back to the countries in which their abominable deeds were done in order that they may be judged and punished according to the laws of these liberated countries and of the free governments which will be created therein." After promising that the guilty parties would be pursued "to the uttermost ends of the earth," the declaration concluded with the assurance that major criminals, "whose offences have no particular geographical localization," would be punished by the joint decision of the Allied governments.

Agencies Created by the Moscow Conference. Two coordinating agencies were established by the three governments. The first of these was the Advisory Council for matters relating to Italy. It was composed of representatives of the three powers, plus a representative from the French Committee of National Liberation, and provision was made for the eventual inclusion of Greek and Yugoslav representatives as well. The Council was to deal with nonmilitary matters entirely and was to make recommendations to the respective governments for the coordination of Allied policy toward Italy. Representatives first appointed were Harold Macmillan, Great Britain; Andrey Vyshinski, Russia; Robert Murphy, United States; and René Massigli, French Committee.

The second agency was the European Advisory Commission established in London for the purpose of studying questions relating to Europe. It, too, had no power beyond the preparation of joint recommendations to be submitted to the three constituent governments. Even so, the creation of this Commission was hailed by the *London Times* as "the most important operative decision of the conference" because it is "the first real political organ to be established by the United Nations." The representatives on this Commission were Ambassador John G. Winant, United States; William Strang, Great Britain; and Ambassador Fedor T. Guseff, Russia. The fact that the establishment of this Commission was first proposed by the Soviet authorities was a source of special gratification to the British and American governments.

The Cairo Conference. Throughout the year President Roosevelt and Prime Minister Churchill had repeatedly referred in public statements to their desire to meet with Premier Stalin before the end of 1943. It was clear, too, that they desired to meet with Generalissimo Chiang Kai-shek to discuss matters relating to the war with Japan. Since these two objectives could scarcely be reached at the same conference, arrangements were made whereby two successive conferences could be held respectively with the Chinese and Russian statesmen. Enroute to meet with Premier Stalin, President Roosevelt and his staff and Prime Minister Churchill and staff met at Cairo with the Generalissimo and Madame Chiang Kai-shek and their advisers. The meetings, which lasted from November 22-25, resulted in a communiqué stating the agreement which had been reached with respect to the settle-

ments to be made at the end of the war in the Far East. After stating their determination to crush Japan, and forswearing any gain or territorial expansion for themselves, the conferees made the following significant declaration:

... It is their purpose that Japan shall be stripped of all the islands in the Pacific which she has seized or occupied since the beginning of the first World War in 1914, and that all the territories Japan has stolen from the Chinese, such as Manchuria, Formosa, and the Pescadores, shall be restored to the Republic of China.

Japan will also be expelled from all other territories which she has taken by violence and greed.

The aforesaid three great powers, mindful of the enslavement of the people of Korea, are determined that in due course Korea shall become free and independent.

With these objects in view, the three Allies, in harmony with those of the United Nations at war with Japan, will continue to persevere in the serious and prolonged operations necessary to procure the unconditional surrender of Japan.

While this statement did not establish a formula for the disposition of all Japanese territories about which problems might arise (e.g., the Bonin Islands, the Ryukyu Islands, Karafuto), it did provide an important indication of Chinese policy toward many of the territorial problems which would be created by the defeat of Japan. Also, it took a first step toward a new Pacific status by the declaration that Japanese control over territories acquired since 1895 was to be ended. The second step, which could not then be taken, was the determination of a future regime for those Japanese-held territories, such as the Mandated Islands, which in all probability would not be assigned to China.

The Tehran Conference. The long-awaited and much-discussed meeting between Premier Stalin, Prime Minister Churchill and President Roosevelt took place at Tehran, Iran, from November 28-December 1. In an atmosphere of complete cordiality, the three statesmen conferred together on war strategy and problems of postwar settlement. The text of the final communiqué was as follows:

We—The President of the United States, the Prime Minister of Great Britain, and the Premier of the Soviet Union, have met these four days past, in this, the capital of our Ally, Iran, and have shaped and confirmed our common policy.

We express our determination that our nations shall work together in war and in the peace that will follow.

As to war—our military staffs have joined in our round table discussions, and we have concerted our plans for the destruction of the German forces. We have reached complete agreement as to the scope and timing of the operations to be undertaken from the east, west, and south.

The common understanding which we have here reached guarantees that victory will be ours.

And as to peace—we are sure that our concord will win an enduring peace. We recognize fully the supreme responsibility resting upon us and all the United Nations to make a peace which will command the goodwill of the overwhelming mass of the peoples of the world and banish the scourge and terror of war for many generations.

With our diplomatic advisors we have surveyed the problems of the future. We shall seek the cooperation and active participation of all nations, large and small, whose peoples in heart and mind are dedicated, as our own peoples, to the elimination of tyranny and slavery, oppression and intolerance. We will welcome them, as they may choose to come, into a world family of Democratic Nations.

No power on earth can prevent our destroying the German armies by land, their U-boats by sea, and their war plants from the air.

Our attack will be relentless and increasing.

Emerging from these cordial conferences we look with confidence to the day when all peoples of the world may live free lives, untouched by tyranny, and according to their varying desires and their own consciences.

We came here with hope and determination. We leave here, friends in fact, in spirit, and in purpose.

ROOSEVELT, CHURCHILL, AND STALIN

Signed at Tehran, Dec. 1, 1943

Informal in style and general in phraseology, this statement was more an indication of the spirit in which the meeting had taken place than a summary of the agreement which had been reached

on any matters, even those not relating to the conduct of the war. Nonetheless, the important thing was that the close working collaboration previously established between President Roosevelt and Prime Minister Churchill had now been broadened to include the chief political figure of the other leading member of the United Nations.

More specific was the second conference document issued on the same day (December 6) concerning the future status of Iran. Signed by the three conferees, this declaration pledged the three governments to make all possible economic assistance available to Iran during the war, and, at the close of hostilities, to give full consideration to the prospective postwar economic problems of the country. Finally, the declaration stated that the three governments and the Iranian government were united in their "desire for the maintenance of the independence, sovereignty and territorial integrity of Iran." This last assurance, designed to put an end to speculation concerning the possible postwar revival of Anglo-Russian rivalry for the domination of Iran, was widely hailed as a constructive attempt to allay the apprehensions of the smaller powers over the prospect of a postwar world which would be dominated at least for a time by the "Big Three."

Second Cairo Conference. Returning from Tehran, the President and the Prime Minister, together with Foreign Secretary Eden and Harry Hopkins, met with President Ismet Inonu, of Turkey, and with the Turkish Foreign Minister, Numan Menemencioğlu, in Cairo from December 4-6. In view of Turkish neutrality, the communiqué issued at the end of the conference was necessarily general in character. It did, however, emphasize "the strength of the alliance which unites Great Britain and Turkey" and the "firm friendship existing between the Turkish people and the United States of America and the Soviet Union." Further emphasis was laid upon the fact that the conference had demonstrated "that the closest unity existed between the United States of America, Turkey and Great Britain in their attitude to the world situation." (For text of the communiqué, see Department of State *Bulletin*, Vol. IX, No. 233, Dec. 11, 1943.)

Bermuda Conference on Refugees. The intergovernmental committee set up by Great Britain and the United States after the Evian Conference of 1938, to deal with the refugee problem, continued activity during 1943 by sponsoring a conference of representatives of the two governments at Bermuda from April 19-29. President Harold W. Dodds of Princeton University headed the American delegation and Richard Law was the chief British representative. A final report, released to the press on May 19, stated that the Conference, while refusing to consider any measures which would involve negotiation with the heads of the Axis states, or which might impair the war effort of the United Nations, had prepared recommendations for the movement of refugees from neutral countries and, in this connection, had agreed upon a number of temporary havens to which refugees might be moved. A declaration of the determination of the governments to provide for the repatriation of the refugees upon the termination of hostilities was also recommended. Finally, the Conference submitted a plan for an enlargement of the scope and powers of the intergovernmental committee. See REFUGEES.

OTHER DEVELOPMENTS

Government of Occupied Territories. Throughout the year there was much discussion of possible Unit-

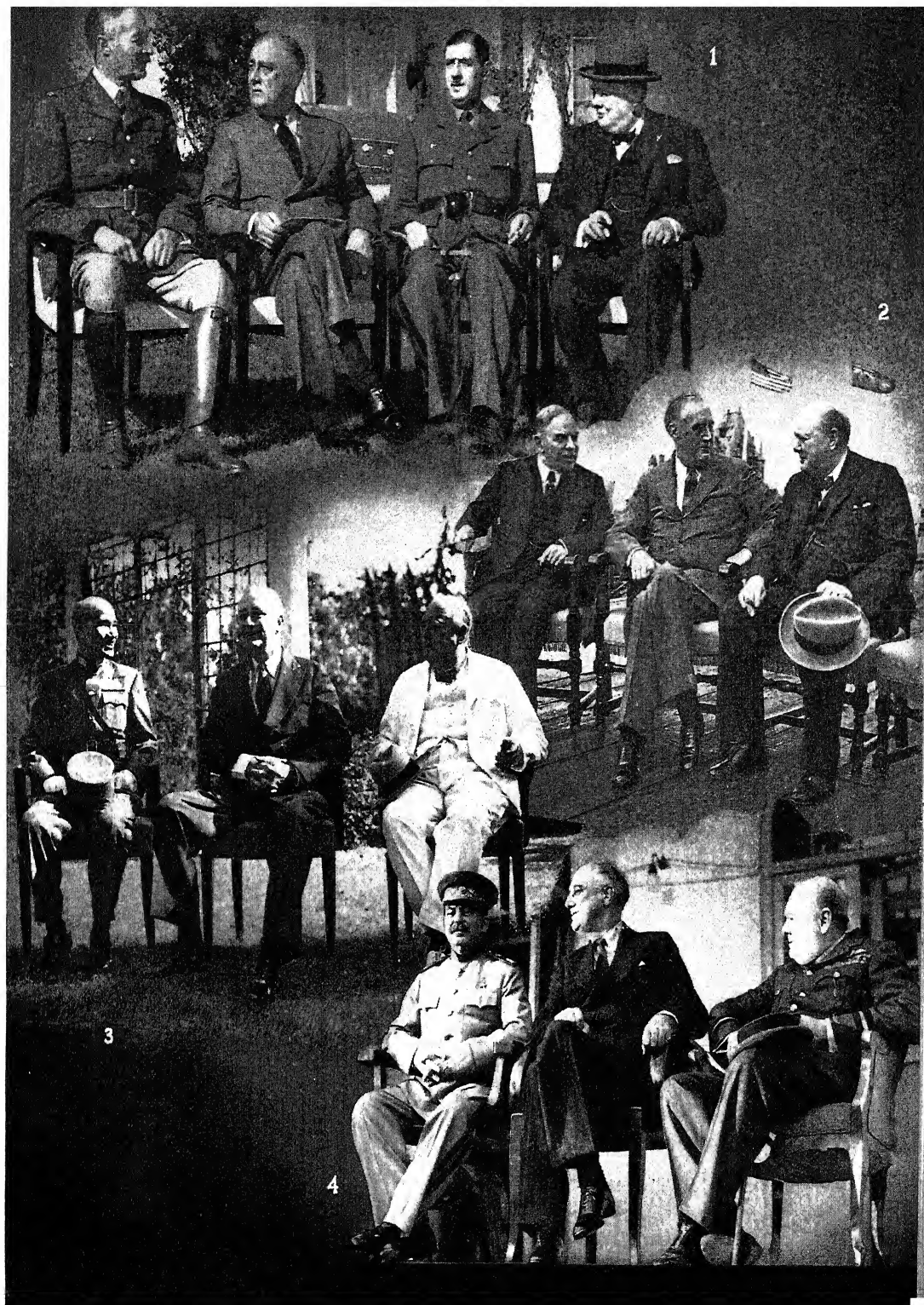
ed Nations arrangements for the temporary government of territories liberated from Axis rule and for enemy territories which might come into United Nations hands by conquest or surrender. Both in Britain and the United States special schools were established where army and navy officers received special training for this purpose, and in Washington a Combined Civil Affairs Committee of American and British officials was established under the Combined Chiefs of Staff for the purpose of planning and coordinating administrative policies in areas occupied as a result of combined military operations.

The AMG. By the end of the year the conquest of Sicily and the subsequent surrender of Italy had made it necessary for the British and American authorities to establish an Allied Military Government of Occupied Territories (customarily abbreviated to AMG) for Sicily and for that part of Italy behind the Allied lines. In Sicily this military government was set up under the direct authority of Gen. Sir Harold Alexander who was designated Military Governor of the Island as well as commander of the Allied forces there. Lord Rennell of Rodd became the active administrative head, and his chief assistant was Brig. Gen. Frank J. McSherry. In the organization under these officers, British graduates of their Civil Affairs Staff Center and American officers trained at the Charlottesville, Va., School of Military Government were mingled indiscriminately in a combined administration which undertook the complex tasks of restoring order, reestablishing public utilities, reopening schools, rebuilding shattered communications systems, providing immediate relief for the civil populace, and all the other problems involved in first stages of repairing the havoc of war.

Control Commission for Italy. Reference has been made above to the Advisory Council for affairs relating to Italy, created at the Moscow Conference. This agency superseded the Allied Mediterranean Commission, the establishment of which had tentatively been agreed upon several months earlier. Beneath this council there was established an Allied Control Commission consisting of a Political Section and an Economic and Administrative Section. Each section was staffed by British and American members. Initially, Henry W. Grady, former Assistant Secretary of State, was designated as the ranking American member of the Economic and Administrative Section, and Samuel Reber, a U.S. Foreign Service Officer, was appointed to a position of similar rank on the Political Section.

Investigation of War Crimes. In January, 1942, eight Governments-in-Exile and the Free French Committee signed a joint declaration committing themselves to the postwar punishment of persons responsible for acts of criminal violence committed by German armies and their satellites in occupied territories in violation of the 1907 Hague Convention. Fifteen nations had joined in this warning by Dec. 31, 1943. On July 30, 1943, President Roosevelt urged neutral nations to deny asylum to such war criminals. On the following day notes to this effect, signed by Great Britain, Soviet Russia, and the United States, were sent to each of the neutral nations. More emphatic was the Moscow declaration on this subject which is summarized above.

Investigation of war crimes was implemented by the establishment in London of a United Nations Commission for the Investigation of War Crimes. Herbert C. Pell has been appointed as the U.S. representative on the Commission. In addition to the collection and collation of factual data, the



British Official Photos, I.N.P. (top)

UNITED NATIONS LEADERS IN A SERIES OF HISTORIC MEETINGS

- | | |
|---|--|
| 1. At Casablanca: Giraud, Roosevelt, De Gaulle, Churchill | 2. At Quebec: MacKenzie King, Roosevelt, Churchill |
| 3. At Cairo: Chiang Kai-shek, Roosevelt, Churchill | 4. At Tehran: Stalin, Roosevelt, Churchill |



I.N.P.

UNITED NATIONS FOOD CONFERENCE AT HOT SPRINGS

Many private organizations are at work relieving the plight of the needy, while officials of the various nations attack the broad problems of relief and rehabilitation. Right: A young patron of the National Refugee Service.

FIRST SESSION OF THE UNRRA AT ATLANTIC CITY



I.N.P.

Commission was concerned with the preparation of arrangements for the actual conduct of the trials.

Axis Control of Property in Occupied Territories. Concern over the extensive transfer of property rights, by coercion or otherwise, in occupied territories to Axis governments and their nationals resulted in a United Nations Declaration signed by 17 governments in London, Jan. 5, 1943. The signatories gave blunt warning that they "reserve all rights to declare invalid any transfers of, or dealings with, property rights and interests of any description whatsoever which are, or have been, situated in the territories which have come under occupation or control . . . of the governments with which they are at war." They added that "this warning applies whether such transfers or dealings have taken the form of open looting or plunder, or of transactions apparently legal in form even when they purport to be voluntarily effected."

Reorganization of Military Command. In preparation for an all-out offensive against Germany in 1944 the American-British high command was reorganized late in the year, and President Roosevelt announced in his Christmas Day broadcast that Gen. Dwight D. Eisenhower had been selected as the supreme commander of the Allied forces. His Deputy was Air Chief Marshal Sir Arthur Tedder, and Gen. Sir Bernard L. Montgomery was chosen to head all British ground forces under General Eisenhower's command. Gen. Sir Henry Maitland Wilson succeeded to the command of Allied forces in the Mediterranean. Gen. Sir Harold Alexander remained as commander-in-chief of the Allied armies in Italy. Lt. Gen. Ira C. Eaker was appointed to head Allied air forces in the Mediterranean, and Air Chief Marshal Trafford Leigh-Mallory was picked to command the Allied air forces in the West. General Wilson's chief American assistant in the Mediterranean was Lt. Gen. Jacob L. Devers. (For previous organization of intergovernmental war machinery, see 1943 YEAR BOOK, page 704.)

War and Peace Aims. For a comprehensive list of documents and official statements concerning the war and peace aims of the United Nations, see "War and Peace Aims," Special Supplement No. 1 (Jan. 30, 1943) and No. 2 (December, 1943) to the *United Nations Review* (United Nations Information Office, 610 Fifth Avenue, New York City). Also, see Louise W. Holborn, ed., "War and Peace Aims of the United Nations" (World Peace Foundation, 40 Mt. Vernon St., Boston, Mass.). The monthly issues of the *United Nations Review* contain much useful documentary material.

See the articles on the various United Nations; BANKS AND BANKING; LEAGUE OF NATIONS; POSTWAR PLANNING under *International*; REFUGEES; UNITED STATES under *Postwar Policy Issues* and *Foreign Relations*; also, the organizations listed under JOINT and COMBINED; RELIEF AND REHABILITATION. Compare AXIS POWERS.

GRAYSON KIRK.

UNITED NATIONS BANK FOR RECONSTRUCTION AND DEVELOPMENT. See BANKS AND BANKING; POSTWAR PLANNING under *International*.

UNITED NATIONS INFORMATION BOARD. An organization created under the name of the Inter-Allied Information Committee in September, 1940. It is served by the staff of the United Nations Information Office, which is financed by 19 of the United Nations and works closely with the Office of War Information. The Office acts as a service agency for establishments of the United States government and for the public, and as a central clearing house for

information on postwar planning. It maintains a reference library and publishes monthly the *United Nations Review*. Chairman of the Board: Arthur Sweetser.

UNITED NATIONS RELIEF AND REHABILITATION ADMINISTRATION (UNRRA). See RELIEF AND REHABILITATION; UNITED NATIONS. For Council, see also LEAGUE OF NATIONS.

UNITED SERVICE ORGANIZATIONS, INC. (USO). Following passage of the Selective Service Act, Sept. 14, 1940, when Army camps and Navy posts were rapidly filling up with trainees, the problem of providing off-duty recreational and other services to the men was forcibly brought to public attention. Small communities near training camps lacked the means and the facilities to cope with hundreds of daily visitors in uniform. Rather than have these services rendered independently through separate agencies as was done in World War I, leaders of the agencies saw the advantage in pooling their experience and skills in one common organization, while at the same time retaining their separate identities. Accordingly, on Feb. 4, 1941, with the approval of President Roosevelt and the War and Navy Departments, USO was formed with the following member agencies: The Young Men's Christian Associations, the National Catholic Community Service, the Salvation Army, the Young Women's Christian Associations, the Jewish Welfare Board, and the National Travelers Aid Association (qq.v. under SOCIETIES).

USO is supported entirely by public subscription. In 1941 and 1942 it obtained \$14,353,666 and \$32,586,501 respectively through its own campaigns. In 1943, with 16 other major war-related agencies, it was a member of the National War Fund (q.v.), which conducted a nation-wide campaign for \$125,000,000. USO's quota of that amount was \$61,227,000 for 16 months' operation.

The groups served are men and women in the armed forces. Members of the Women's Army Corps and women's auxiliaries of the Navy, Coast Guard, and Marines are admitted to USO clubs and other service units on the same basis as men in uniform. Services are also extended, as required, to Army and Navy nurses, merchant seamen, wives of service men, and war industry workers in certain areas. There are USO operations in the continental United States and in bases elsewhere in the western hemisphere. USO-Camp Shows visits American troops in all combat zones, as well as throughout the western hemisphere.

USO came into being at the time the nation was preparing its defenses under the threat of war. Future demands could not be foreseen. This required flexibility, and quick adaptation to meet new needs as they arose. Originally it was planned to operate 341 clubs in 200 communities. When America entered the war, Dec. 7, 1941, USO had 496 clubs and other centers in operation. With the tremendous expansion of our armed forces USO services also had to expand rapidly; USO operations totaled 2,779 as of Dec. 20, 1943.

It has been necessary to diversify the types of service provided. Greatly increased travel by men in uniform called for special facilities in rail and bus stations. The Troops-in-Transit Service was instituted and by the end of 1943 was operating 125 lounges at principal transportation centers, providing comfortable rest quarters, reading and writing material, refreshments, and information. Supplementing the lounges, 152 USO-Travelers

Aid desks were assisting service men and their families with travel problems.

Coastal defenses were greatly strengthened after Pearl Harbor. Life at these outposts is lonely; leaves are infrequent. To reach these men USO organized its Mobile Service Division, which operates 130 units on both the Atlantic and Pacific coasts, and 28 units inland for troops on maneuvers. Mobile units give motion picture shows, and bring books, writing paper, games, refreshments, and other supplies.

The USO Overseas Services Division was formed to serve troops stationed in western hemisphere bases outside continental United States. This Division operates 166 clubs and other service units from Alaska and Newfoundland down through the Panama Canal, Bermuda, the Caribbean area to Brazil, and also in Hawaii.

USO-Camp Shows, an affiliate formed after Pearl Harbor, has become the largest live-talent theatrical circuit in American history. Eighty-five units tour Army camps and Navy posts throughout the United States, and 35 entertain troops in western hemisphere bases and in the combat zones. USO-Camp Shows performs directly within military reservations, supplying admission-free entertainment to service men and women. Leading stars of stage, screen, and radio, as well as concert artists and symphonic and popular orchestras give volunteer performances.

The clubs render the chief volume of USO services. After Pearl Harbor new clubs opened at an average rate of 52 a month for nearly two years, reaching into 48 States, the District of Columbia, and 16 western hemisphere bases. There are now 1,716 clubs in continental United States, including 643 operated by local communities in affiliation with USO.

Equipped with lounges, writing rooms, showers, snack bars, game rooms, libraries, phonographs, radios, and auditoriums, they provide a haven for service men and women on leave from military posts. Most clubs have photographic dark rooms and craft and hobby shops. Programs include dances, moving pictures, classes in languages, crafts, art and other subjects, social parties, forum and current event groups, sports, and musical events.

Information and counsel on personal problems constitute an important part of club services. USO staffs, carrying out the inter-faith policy of USO, offer to those desiring them religious programs in cooperation with local clergy of the different faiths. Opportunities are also provided for service men and women to continue customary church attendance and association with churchmen and church members. Religious counsel, as requested, is also available.

Special programs are held for the wives of service men, such as social gatherings and classes in prenatal and child care, sewing, nutrition, and cooking.

Through the cooperation of local groups—women's organizations, civic, business, and patriotic clubs, and churches—the USO clubs reach beyond their four walls into community life. These groups sponsor some programs within the clubs, and others elsewhere, such as picnics, dances, beach and fishing parties, depending on the topography and the season. Through the club, local families invite men and women to dinners in their homes. In this way the club enters the community and the community becomes part of the club.

The work of 1,000,000 volunteers is indispensable at clubs and lounges, not only in assisting pro-

fessional staffs but also in providing companionship to men and women in service at programs and social events.

In addition to serving men and women in the armed forces, USO extends services to war workers and their families in certain overcrowded war production centers. Programs are patterned after those for the armed forces, with emphasis on classes for women similar to those for the wives of service men.

Of USO's 2,779 operations, 1,790 are operated by USO member agencies and 989 by local communities in affiliation with USO. They are located in 1,214 cities and towns in 48 States, and the District of Columbia, and in 76 communities in 16 areas elsewhere in the western hemisphere. Attendance at both clubs and lounges is approximately 28,000,000 a month. USO-Camp Shows perform before an average monthly audience of 2,000,000 including combat zones.

USO officers in 1943 were: Chester I. Barnard, President; John D. Rockefeller, Jr., Honorary Chairman; Walter Hoving, Chairman of the Board; W. Spencer Robertson, Chairman of the Executive Committee; Francis P. Matthews, Frank L. Weil, and Mrs. Henry A. Ingraham, Vice-Presidents; Randall J. LeBoeuf, Jr., Secretary; and John F. Hickey, Treasurer. National headquarters are in the Empire State Building, 350 Fifth Avenue, New York 1, N.Y. See MUSIC; NATIONAL WAR FUND; the component agencies under SOCIETIES.

UNITED STATES. The area of the United States proper, or the 48 States and the District of Columbia, is 3,022,387 square miles; this excludes inland waters having an area of 45,259 square miles. The noncontiguous lands subject to the authority of the United States (Alaska, Hawaii, the Philippine Islands—autonomous but not yet independent, the Panama Canal Zone, Puerto Rico, Guam, the Virgin Islands, and American Samoa) comprise 711,606 square miles.

AREA AND POPULATION OF UNITED STATES, ITS TERRITORIES AND INSULAR POSSESSIONS

Political Division	Area Sq. miles	Population (1940 census)	Capital
United States.....	3,022,387	131,669,275	Washington
Alaska ^a	586,400	72,524 ^d	Juneau
Hawaii ^a	6,419	423,330	Honolulu
Puerto Rico.....	3,435	1,869,255	San Juan
Philippine Isls. ^b	115,600	16,356,000 ^e	Manila
Guam.....	206	22,290	Agana
Samoa, American.....	76	12,908	Pago Pago
Panama Canal Zone ^c	553	51,827	Balboa
Virgin Islands.....	133	24,889	Heights/ Charlotte Amalie
Totals.....	3,738,395	150,621,231	

^a Territory. ^b Self-governing commonwealth. ^c Leased from the Republic of Panama in perpetuity. ^d Census taken Oct. 1, 1939. ^e Estimate derived by extrapolation from the census figures for 1918 and 1939. ^f Office of the Governor.

Note: The United States also possesses, or claims possession of, the following Pacific islands: Baker, Howland, and Jarvis Islands, fringing the equator in mid-Pacific about 1,000 miles S.S.W. of Honolulu (U.S. aerologic stations were established on all three islands in 1936 and an emergency airfield on Howland Island in 1937); Johnston Island (q.v.), Midway Islands (q.v.), Palmyra Islands (q.v.), and Wake Island (q.v.). Canton Island (q.v.) and Enderbury Island are under joint Anglo-American administration.

The population of continental United States (Sixteenth Census) April, 1940, was 131,669,275; civilian population, about 131,300,000. The estimated civilian population, Mar. 1, 1943, was 128,231,363. See VITAL STATISTICS. For aliens, see IMMIGRATION. For populations of individual States, see the States, Territories, and Possessions.

Agriculture. See AGRICULTURE; articles on crops, etc.

Commerce. See BUSINESS REVIEW; CUSTOMS, BUREAU OF; TRADE, FOREIGN.

Communications. See COMMUNICATIONS, ELECTRICAL; FEDERAL COMMUNICATIONS COMMISSION; POST OFFICE; WAR COMMUNICATIONS BOARD.

Defense. See the articles listed under WAR; MILITARY PROGRESS, NAVAL PROGRESS, and WORLD WAR; also below.

Education. See EDUCATION; SCHOOLS; UNIVERSITIES AND COLLEGES.

Finance. See PUBLIC FINANCE; TAXATION; and below under *Legislation*.

Judiciary. See LAW.

Manufacturing. See BUSINESS REVIEW; articles on leading products.

Mineral Production. See BUSINESS REVIEW; MINES, BUREAU OF; articles on leading minerals.

States and Territories. See the separate article on each; STATE LEGISLATION.

Transportation. See AERONAUTICS; MOTOR VEHICLES; RAILWAYS; ROADS AND STREETS; SHIPPING; WATERWAYS.

THE DOMESTIC FRONT

The year 1943 found the United States, in bold contrast with its plight on the fateful Sunday of Dec. 7, 1941, completely on the offensive on the battlefronts throughout the world with its fighting men or materiel, or both. (See WORLD WAR.) For two years the Allied divisions, fleets, squadrons, and flights, growing steadily in force and battle skill, had hammered at Axis might with decisive effect. The tide had turned in every theater of war. As the year ended the Anglo-American assault forces were gathering under the supreme command of Gen. Dwight D. Eisenhower for the long-awaited invasion of Hitler's "Fortress Europe" from the West and North. One of the nation's big problems was to put down recurrent waves of overoptimism that threatened to relax the home task of backing up the fighting fronts. Complacency became a new war hazard. Although battles brought Allied victories, harmony was not complete on the domestic front.

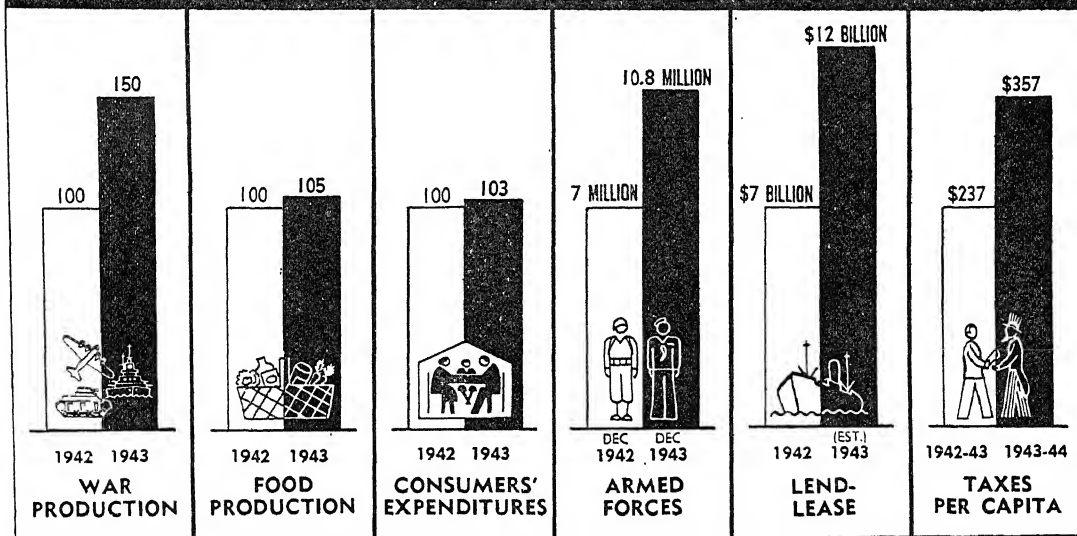
Whereas the history of the United States dur-

ing 1942 was primarily a record, at home, of readjustments of humans, money, and machines to meet unprecedented war demands, that of the year just closed was marked by a driving force, spurred by mounting casualty lists (which neared 140,000 at year-end). Despite many internal handicaps, it brought all branches of the armed forces nearly to peak strength, and production of materials and materiel to maximum capacity volume, with planes rolling off production lines by November at a rate faster than one every five minutes, day and night. And it brought the United States itself to a new frame of mind.

The nation was thinking and acting with vastly increased unity far beyond its borders. Traditional barriers, economic, political, racial, and philosophical, crashed under the impact of united determination for complete obliteration of Axis aggression and treachery. What remained of isolationism was in full retreat. That there would be no letup short of "unconditional surrender," determined at the Roosevelt-Churchill conference at Casablanca in January (and effective when Italy's armed forces capitulated in September) was only the first of many 1943 military and political decisions that traced the steady progress of the war toward assured victory. The personal meetings between the American President and the British Prime Minister continued, with significant timing, at Washington, Quebec, Cairo, and Teheran, each writing an important chapter of history. The nation followed its President over 25,000 miles of foreign travel under wartime hazards, and gave his actions approval.

But strikes continued to break out over wage increases to meet rising living costs. Repeatedly the Government found it necessary to seize mines and factories to keep production going. The specter of inflation became more menacing as pay, straining at limitations, and prices, breaking through ceilings, provoked periodic crises in coal, aircraft, steel, and other vital war industries. Organized labor set out to break through the "Little Steel" wage stabilization formula limiting increases to 15 per cent to cover the rise in living costs between January, 1941, and May, 1942. Farm groups in and out of Congress sought to modify (some even to scrap) the price control system. Resigna-

AMERICA'S WAR EFFORT



tions disrupted the Office of Price Administration and that organization again changed its leadership and was streamlined to improve its operations. Administration programs for consumer food price roll-backs by means of subsidies split the Congress. War Food Administrator Chester C. Davis, disagreeing with that system, resigned. War agencies, and officials heading or holding key positions in them, brought their quarrels into the open.

On May 29, President Roosevelt, moving swiftly to repair the cracks and breakdowns of a vast Administration war machine weakened by divided authorities—the duplicated functions and feuding that had become “the Battle of Washington”—established a supreme Federal agency, the Office of War Mobilization, to conduct the war on the home front. James F. Byrnes, who had been Director of Economic Stabilization since October, 1942, was put in command. (See subhead below.) Under Presidential draft, Judge Fred M. Vinson resigned from the U.S. Court of Appeals for the District of Columbia, to which he had gone from a seat in the House of Representatives, to become Director of Economic Stabilization (q.v.), No. 2 post in the home front command. Bernard M. Baruch, still able and vigorous, was called back to war trouble-shooting repeatedly when rubber, manpower, and other snarls appeared.

President Roosevelt, in his January budget message, which called for the meeting of costs comparable in this one year to those of the Government during the first 143 years of the nation, reminded that “we are all soldiers, whether in uniform, overalls, or shirt sleeves.” In uniform and out, many millions of men and women volunteers on the home front pursued unabated their activities in many services. While improved strategic conditions permitted a relaxation of air raid warden, spotting, and similar duties, the work of such volunteers as those in the Volunteer Special Services of the American Red Cross, the American Women's Volunteer Services, and the United Services Organizations, increased tremendously. As the tempo of battle rose volunteer donors contributed approximately 5,000,000 pints of blood for life-saving plasma. (See SOCIETIES.)

The people became used to rationing, and uncomplainingly, for the most part, resorted to crowded trolley car and bus, for town travel. Housewives became expert at planning meals on a point system, introduced in January. With sugar and coffee already rationed, the program spread through canned vegetables and fruits, and soups, meats, butter, catsup, and so on. Winter brought serious heating problems into homes in the East and North. Household holders who, because of oil shortages, had converted to coal found this fuel hard to get, though the Solid Fuels Administration stretched supplies by allocations and accelerated transportation of fuels. Gasoline shortages persisted, pleasure driving was banned during two periods, though midsummer vacation driving was allowed. In August and September gasoline rationing in the East eased up slightly and tightened up in the mid-West to equalize supplies. The people got along.

To increase the oil and gasoline movements to the East, the 1,251-mile “Big Inch” pipeline (\$95,000,000) from Long View, Tex., to Phoenixville, Pa., was rushed to completion and dedicated in July by Secretary of the Interior Ickes as Petroleum Administrator for War (q.v.). This gave promise of an eventual increase in Eastern receipts by some 300,000 barrels a day, but mostly for war overseas. August brought beer shortages as against

increased consumption. Liquors began disappearing from consumer markets in the autumn to such an extent that the Senate authorized a Judiciary subcommittee to determine whether the shortages were real or created deliberately for profit.

The President, warning that there must be belt-tightening, accompanied by payment of heavier taxes, asked for \$16 billions of new money to close the inflationary gap between buying power and goods and services available for purchase. This request later was modified to \$10,500,000,000. The end of the year saw tax plans, not yet enacted, to produce one-fourth of that amount in new revenue.

Office of War Mobilization. Established by Presidential executive order on May 29 as the over-all Federal agency to conduct the war on the Home Front, the Office of War Mobilization was assigned these functions: To inaugurate and develop unified programs and establish policies for the maximum utilization of natural and industrial resources for both military and civilian needs. To make maximum use of the nation's manpower outside of the armed forces, maintain and stabilize the civilian economy, and adjust the economy to war needs and conditions. To eliminate conflicts in operations and practices of Federal Departments and agencies engaged in or concerned with war production, procurement, distribution, or transportation of military or civilian supplies, materials, or products. To resolve controversies, except those relating to disputes over agricultural prices and wage increases which would affect price ceilings, these to be handled by Fred M. Vinson, the Director of Economic Stabilization. The OWM was given a War Mobilization Committee, or “cabinet,” consisting of Secretary of War Stimson, Secretary of the Navy Knox, Director Vinson, Donald M. Nelson, chairman of the War Production Board, and Harry L. Hopkins, special assistant to the President and chairman of the Munitions Assignment Board. But the committee had only advisory authorities. The power to establish policies and sign directives was left with Mr. Byrnes, subject to the direction of the President.

To “keep both our military machine and our essential economy running in team at high speed,” the President clothed Mr. Byrnes with powers exceeding those delegated to Donald M. Nelson, as chairman of the War Production Board (the top civilian war agency of 1942), or those which President Wilson loaded upon Bernard M. Baruch, as chairman of the War Industries Board, during the first World War. It was asserted facetiously that Mr. Byrnes had been made “Assistant President”—on the assumption that he had been assigned to run the home front, leaving the President free to handle international problems.

The OWM has not published any report of its activities, and it operates much behind closed doors. However, it can be stated that Mr. Byrnes has had a hand in the following (though the extent to which his decision has been final is not clear): the manpower situation; the “Little Steel” formula; the Government's tax policy (in line with his stabilization duties); the holding of the National War Labor Board together at a time when its members were ready to resign (by allowing some flexibility in the hold-the-line program); the Administration's fight for roll-back subsidies; coal mine and railroad negotiations; and the intramural “Battles of Washington” (see below under *Production*).

Mr. Byrnes apparently has leaned heavily upon Mr. Baruch, especially with regard to the manpower situation and in the formulation of a uni-

form contract-termination clause for fixed-price contracts. On November 6, Mr. Baruch was appointed head of a new unit within OWM for dealing with war and postwar adjustment problems, and for developing unified programs and policies to be pursued by the various government agencies concerned.

See also BUSINESS REVIEW; POSTWAR PLANNING.

Inflation. Inflation sought opportunities in thousands of places to undermine the economic structure. Emergency agencies set up since 1940 rushed in to close a \$16-billion inflationary gap, proposing drastic increases in taxes, enforced saving, rigid price and rent ceilings, wage stabilization, heavier government bond buying, restrictions on farm and city cost rises, extensions of rationing, and curbs upon credit purchases, but corrective measures were operating piecemeal.

President Roosevelt vetoed the Bankhead farm parity price bill, warning of "an inflationary tornado," on April 2, holding that agricultural prices as a whole (the striking of relative rates between the farmer's purchasing power and that of the city worker) had reached 115 per cent of the parity which agriculture had striven for years to attain. The bill died, but other similar issues took its place.

In a far-reaching "hold-the-line" order issued April 8, President Roosevelt forbade wage increases above the level of the "Little Steel" formula and restricted future price elevations to the minimum extent allowed by law. He authorized War Manpower Commissioner Paul V. McNutt to prevent workers from shifting to jobs at higher pay except when the change would be to aid the prosecution of the war, and directed Chester C. Davis, then War Food Administrator, and Prentiss M. Brown, then Price Administrator, to put ceilings upon all commodities which affected the cost of living and to roll back those unnecessarily high. New plans for fighting inflation with roll-back subsidies on foods were announced in May by Administrator Brown, the program concentrating upon beef, pork, veal, mutton, coffee, and butter, with consumer prices to be rolled back by an average of 10 per cent through the use of Reconstruction Finance Corporation funds. This supplemented the plan which the Commodity Credit Corporation had put into effect for certain vegetables, cheese, coffee, tea, sugar, and other items. Food, long an inflationary sore spot, continued a major problem. The OPA (q.v.) underwent a streamlining in mid-August, with Chester Bowles, general manager, aiding Administrator Brown in the selection of businessmen to replace the attorneys and "professors" whose work had irked Congress. Mr. Bowles was understudying Mr. Brown, who had taken the administratorship on a temporary basis and, as soon as the reorganization was completed, took over when Mr. Brown resigned October 21.

By October money in circulation reached a new record of \$19¼ billions, an increase of \$410 millions over September, and it continued increasing. War bond redemptions were \$148 millions, against \$26 millions a year earlier. However, war bond sales had increased from \$755 millions to \$1,927,000,000. For a second consecutive month living costs edged upward, and the OWM looked to new ways of applying the brakes.

The President, on November 1, sent his longest message to Congress, defending the subsidy method of rolling consumer food prices back, and left no doubt that his previous vetoing of subsidy bans earlier in the year (see below under *Food*) would not be his last. Soon, legislation to extend the life

of the Commodity Credit Corporation, the instrument into which subsidy prohibitions had been written, was up again, to carry the CCC forward beyond December 31. On November 23 the House, with a vote of 278-117, extended the CCC to July 1, 1945, but again prohibited food subsidies after December 31. The Senate, extending the CCC to February 17, put its subsidy decision over to the next session. See also BUSINESS REVIEW.

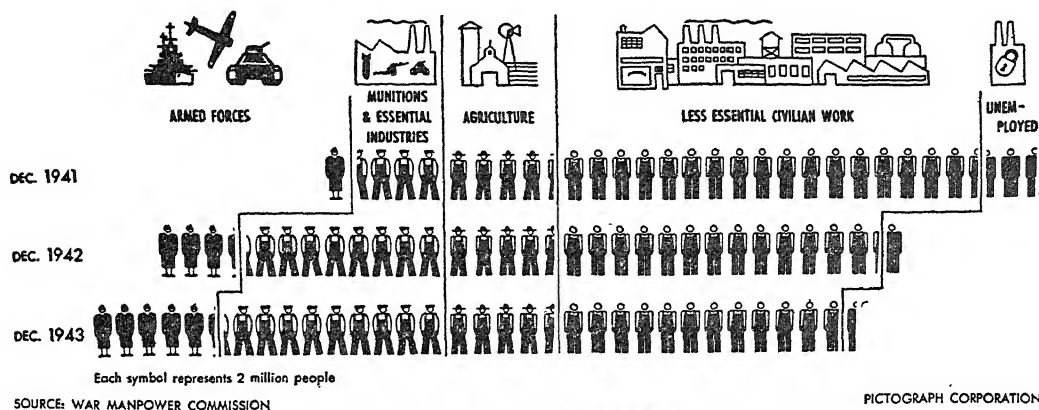
Armed Forces. With the American armed forces at a strength of 10,100,000 (7,400,000 Army and 2,700,000 Navy) as the year closed, Selective Service officials still looked to eventual reductions in their calls, but not as soon as had been expected. To reach goals for July 1, 1944, it appeared that the Army would require 700,000, the Navy 300,000, and that replacements would be at least 300,000. Uncertainty over the outcome of the Congressional controversy over the drafting of pre-Pearl Harbor fathers had slowed down inductions. Disappointing results of recruitment of women to release service men for combat assignment also had a material effect. There was trouble, too, with many local draft boards, which refused to call parents while unmarried men remained undrafted.

The U.S. Navy, since 1940, had become "the greatest sea-air power on earth." In the face of losses and transfers to Allies, it had grown from 1,076 vessels displacing 1,875,000 tons, to 14,072 displacing nearly 5,000,000 tons. The Air Force had risen from 1,744 to 18,269 planes. Successful experiences with landing boats in invasions prompted the initiation of a \$5 billions building program, with \$1 out of every \$4 spent by the Navy to go into construction of this type of craft. Effective combatting of submarines by the Allies rose to new heights in November, when the number of U-boats sent to the bottom exceeded the number of merchant ships they sank. (See AERONAUTICS; MILITARY PROGRESS; NAVAL PROGRESS; SHIPPING.)

Most controversial of the problems of building up the armed forces was that involving the drafting of pre-Pearl Harbor fathers (parents of military age with children born before Sept. 15, 1942). The fight that followed the decision that perhaps 446,000 of the estimated total of 6,550,000 would have to be called between September and January 1, was bitter and sustained. With the issue still pending before Congress, the Father Draft began officially October 1. The Congressional decision, permitting such inductions but putting pre-Pearl Harbor parents at the bottom of nationwide draft pools, and wiping out the War Manpower Commission's "work or fight" program, was not put into law by the President's signature until December 10. In October, November, and December 90,000 (instead of 446,000) pre-Pearl Harbor fathers were inducted, but heavier inductions from this class were forecast for the first six months of 1944. See SELECTIVE SERVICE SYSTEM.

Manpower. By August nearly 65,000,000 men and women were in uniform or in essential occupations, almost one-half of the country's population, but manpower shortages persisted. Commissioner McNutt of the War Manpower Commission (q.v.) expanded the nondeferable ("work or fight") list, which later was to be scrapped by Congress, to cover 60 occupations and activities, and tightened up upon demands that all necessary skills be routed into essential productivity. This was another step taken in the drastic effort to hold off legislation for a National Service Act. Occupations were placed above dependency status in

AMERICAN MANPOWER



the eligibility of Selective Service registrants for draft call. Mr. Baruch went to work as a member of a special "cabinet" to function with Mr. Byrnes to find a way out of the "manpower muddle." The report, made after extensive investigation and study, said that industry must produce more efficiently, or else there must be a cut-back of war production. It called for studies to prevent production of oversupplies of certain war materials, a review of farm draft deferments, checks against laxity in replacing workers deferred for war jobs, stoppage of the cost-plus-fixed-fee system of awarding contracts, and adoption of the West Coast (Baruch) program for withdrawing new contracts and cutting civilian output in accordance with labor supply and demand.

Production. The "miracle of production" for war continued through 1943 despite battles over priorities on materials, quarrels over administrative authority, strike outbreaks, and shortages of manpower and materials. Not all schedules were met in numbers of planes, tanks, and other matériel, but numbers in some programs lost significance through war-dictated changes in types and sizes of fighting products. For an over-all report on war production, see *BUSINESS REVIEW* under *Basic Industries and Armament Production*; *WAR PRODUCTION BOARD*.

Expansion of industry had about reached capacity by October. The big problem ahead was to get still greater production through more efficient employment of facilities and manpower. Methods designed to accomplish this were available in the Byrnes-Baruch report. Old problems, however, remained. With scores of war production programs requiring the same materials, disagreements existed over priorities between various agencies and within the War Production Board (q.v.) itself, where the question of military or business control of materials and programs, long smoldering, came out into the open in February and prompted WPB chairman Nelson to reorganize, with Charles E. Wilson as executive vice-chairman in charge of all programs. While some puzzles were solved, others plagued production in later months when output had to be increased with existing facilities.

"Progressive" tactics in planning and administering the acquisition of war materials from other lands clashed in public with "conservative" management in July, bringing Vice-President Wallace, as chairman of the Board of Economic Warfare,

and Secretary of Commerce Jesse H. Jones, as head of the RFC and its various war corporations, to bitter grips with charges and debate as to which was aiding or hampering the war program. On July 15 President Roosevelt revamped the Administration's foreign economic machine, rebuked the Vice-President and the Secretary of Commerce, abolished the BEW and set up the Office of Economic Warfare (q.v.). In settling this dispute Mr. Roosevelt adopted a general plan based upon the British system of consolidating foreign economic operations, and included lend-lease in the new set-up, with Leo T. Crowley, who had been Alien Property Custodian, at the head of the new establishment.

Within ten days differences between Secretary of the Interior Harold L. Ickes, as Petroleum Administrator for War (q.v.), and Price Administrator Brown, over rationing of gasoline drew Washington focus. These differences spread to oil prices, with Mr. Ickes urging an increase in crude prices to encourage drillings for new petroleum stocks. Exchanges were as bitter as those, earlier in the year, between the War and Navy Departments, on one hand, and William F. Jeffers, Rubber Administrator, on the other, over priorities on materials required for 100 octane gasoline for planes and for synthetic rubber plants. The House, on December 13, voted 171-92 to force the OPA to raise oil prices, a move interpreted as being highly inflationary, and put the next move up to the Senate.

Intercessions by the President and Mr. Byrnes composed these quarrels. On September 14 Mr. Jeffers resigned to return to the presidency of the Union Pacific R.R., saying that "the big job of getting synthetic rubber plants into operation is over." Col. Bradley Dewey, deputy administrator, took over the rubber program. Production reached a rate of 45,000 long tons in December and promised to move up to 70,000 tons a month by the end of 1944. (See *RUBBER*.)

Food. Fears in the spring that food production quotas could not be met, though the United States was faced with the problem of "feeding the world," caused an unprecedented concentration upon wheat, rice, peanuts, beans, potatoes, corn, beef, pork, veal, milk, and eggs. The harvest season showed a production of 5 per cent more food than the 1942 record, including 24-billion pounds of meat. This production, however, was not to

make more bountiful the tables of American homes. Requirements of the armed forces, lend-lease, and the liberated areas were steadily on the increase and must be met. Food supplies in American cities fluctuated from period to period, at times raising reports of "near famines" of meat, exhausted supplies of butter, and scarcities of this item and that, but there also were times when concentrated efforts to repair such lacks resulted in overstocking at points, accompanied by complaints of spoilages.

In March President Roosevelt called in Chester C. Davis, who had been his administrator of the Agricultural Adjustment Administration, to be War Food Administrator, replacing Secretary of Agriculture Claude R. Wickard in command of food production and distribution. But Mr. Davis soon ran into difficulties over the boundaries of his authorities and those of the OPA. Mr. Roosevelt, not wanting a food "czar" despite Congressional demands for one, had set limitations on powers. Congress took the Davis side and on June 25 wrote its first subsidy bans or restrictions into its legislation extending only until the end of the year the life of the Commodity Credit Corporation (q.v. in AGRICULTURE), through which the subsidy program had been chiefly operating. On July 4 Mr. Davis resigned and was replaced as War Food Administrator by Judge Marvin Jones, a former chairman of the House Committee on Agriculture. The President vetoed the anti-subsidy legislation. Congress then extended the CCC's life without action on subsidies, reserving another fight until the autumn, one that continued without final answer through the rest of the year. (See above under *Inflation*.)

The OPA in mid-September set out to cut back the cost of living by at least 2.3 per cent by lowering retail prices through a purchase and sale plan estimated to cost \$100 millions a year, on apples, oranges, potatoes, lard, vegetable oils, and peanut butter. Food prices, which had risen 12 per cent during the last winter, fell 4.1 per cent during June, July, and August below the May levels, but had started up again. (See AGRICULTURE; FOOD INDUSTRY; LIVING COSTS.)

Labor. The no-strike, no-lockout pledges of 1942 were kept generally, but the exceptions were glaring ones. Production records made by labor, as well as by industry, were in keeping with highest American tradition despite the blots upon the record. For the third time in history and while the nation was at war, the country was threatened with a general railroad strike, a threat that was cut short on December 27 when President Roosevelt, giving an hour's notice, ordered Secretary of War Stimson to take the carriers over. The same night found an estimated 170,000 workers away from their posts at vital steel-producing centers in seven States, refusing to work without a retroactive pay clause in a new contract to be written to replace the one terminated by union action. They went back to work the next day after the NWLB voted for retroactive application of final adjustments. See RAILROADS.

"Unauthorized" and "wildcat" walkouts had broken out periodically through the months in one section or another to such extent that question in some instances was raised as to the sincerity of labor leaders in their denunciations of the stoppages or their ability to control their unions. On four separate occasions the nation faced fuel crises through walkouts by members of the United Mine Workers of America, headed by John L. Lewis.

The "no contract, no work" policy traditional

with the U.M.W. led to the walkouts, which twice provoked the Government to seizing the mines, which for a period of months found Lewis declining to "recognize" the War Labor Board, and which resulted finally in a settlement viewed widely as "an appeasement." See COAL.

Strikes of brief duration broke out in the Detroit key production area, at Akron, and in the aviation industries of the East and West Coasts. The Government stepped in a score of times and took plants over. Altogether, while strikes and other stoppages engaged less than one per cent of the vast forces at work, they cost war production an estimated 12,785,000 man-days of lost time.

Congress, in an angry mood over war production stoppages by midyear, passed the Smith-Connally strike control act. President Roosevelt vetoed it June 25, but both Senate (56-25) and House (244-108) overrode his action the same day and put the act upon the books. Labor called it an anti-strike law, but it did not prevent striking.

Throughout the year organized labor, led by the Congress of Industrial Organizations, centered its fight upon the "Little Steel" yardstick. With its demand for a 17-cents-an-hour pay increase, the CIO's United Steelworkers, under Philip Murray, CIO president, sought to break that formula. While wage scales were being held to the 15 per cent increase limit of the "Little Steel" formula, there was nothing to prevent daily or weekly earnings by workers to rise through overtime work, at premium pay. Labor demands, though, were concentrated upon hourly wage scales.

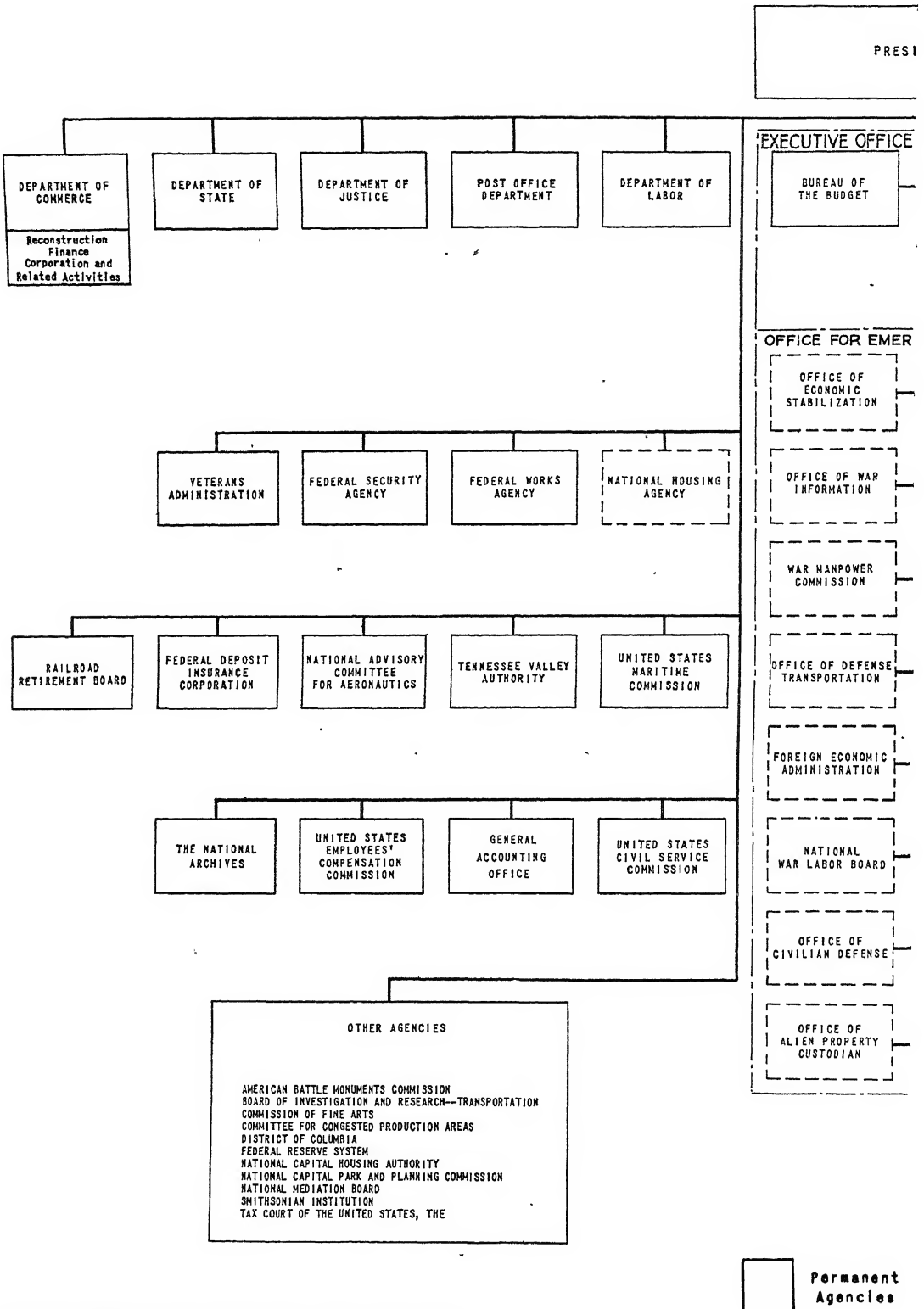
The National War Labor Board, William H. Davis chairman, lost favor with organized labor, while many segments of industry held that it had been too liberal in its wage increase grants and had operated to effect a general 15 per cent rise not always with individual circumstances and conditions in mind. While the wages of organized labor were being elevated to harmonize with the cost-of-living rise between January, 1941, and May, 1942, there were some 15,000,000 "white collar" and other workers, unorganized, who had had their wages and salaries frozen by hold-the-line and other executive decrees.

See LABOR CONDITIONS.

Politics. Politics took no holiday in 1943. Fourth term talk began in Congress and on the sidelines as President Roosevelt started his eleventh year in the White House. Postmaster General Frank C. Walker, heading a delegation of Democratic National Committeemen, called at the White House in March and mentioned a fourth term to the President. "I'm not sure he heard it," Mr. Walker reported later. But through the year the big political question remained the same: "Will the President run again?" Signs that he would were seen from time to time as observers watched closely. Mr. Roosevelt kept them speculating, even after having let it be known that he wanted "New Deal" as the designation of his Administration to give way to "Win the War." After this got out, Mr. Roosevelt, at a press conference, said that Dr. New Deal had cured the internal ills which had attacked the country in 1932, and Dr. Win the War was now called in to cure the fractures and dislocations caused by the "accident" at Pearl Harbor on Dec. 7, 1941. He denounced as "picayune" an inquiry as to whether this was a fourth term declaration.

As the year ended both Democratic and Republican camps were split badly. In the Republican organization the principal objective was to crowd Wendell L. Willkie, 1940 standard bearer and

UNITED STATES GOVERNMENT



EXECUTIVE BRANCH

DENT

OF THE PRESIDENT

THE WHITE HOUSE
OFFICELIAISON OFFICE
FOR PERSONNEL
MANAGEMENTDEPARTMENT OF
THE NAVY

WAR DEPARTMENT

DEPARTMENT OF
THE TREASURYDEPARTMENT OF
AGRICULTUREDEPARTMENT OF
THE INTERIORWar Food
AdministrationSolid Fuels
Administration
for War

AGENCY MANAGEMENT

OFFICE OF WAR
MOBILIZATIONCHIEF OF STAFF TO
THE COMMANDER IN CHIEF
OF THE
U.S. ARMY AND NAVYJOINT CHIEFS OF
STAFF
Office of
Strategic ServicesWAR PRODUCTION
BOARDOFFICE OF PRICE
ADMINISTRATIONOFFICE OF
CENSORSHIPSELECTIVE
SERVICE
SYSTEMBOARD OF WAR
COMMUNICATIONSPETROLEUM
ADMINISTRATION
FOR WARCOMMITTEE ON
FAIR EMPLOYMENT
PRACTICEWAR SHIPPING
ADMINISTRATIONINTERSTATE
COMMERCE
COMMISSIONFEDERAL
COMMUNICATIONS
COMMISSIONFEDERAL POWER
COMMISSIONOFFICE OF THE
COORDINATOR OF
INTER-AMERICAN
AFFAIRSOFFICE OF
SCIENTIFIC
RESEARCH
AND DEVELOPMENTWAR RELOCATION
AUTHORITYFEDERAL TRADE
COMMISSIONUNITED STATES
TARIFF COMMISSIONSECURITIES AND
EXCHANGE
COMMISSIONNATIONAL LABOR
RELATIONS BOARD

Allied Boards

United States and Canada:
 Joint Economic Committees
 Joint War Production Committee
 Material Coordinating Committee
 Permanent Joint Board on Defense
 United States and Great Britain:
 Combined Chiefs of Staff
 Munitions Assignments Board
 Combined Raw Materials Board
 Combined Shipping Adjustment Board
 United States, Great Britain, and Canada:
 Combined Food Board
 Combined Production and Resources Board
 Inter-American Defense Board
 Joint Brazil-United States Defense Commission
 Joint Mexican-United States Defense Commission
 Pacific War Council

Emergency
Agencies

most active of the unannounced 1944 possibilities, out of the scene. The task was concededly a hard one, but apparently showed some, though not conclusive, results. Democratic forces in Congress were divided sharply. Angry southern Senators were smarting under charges by Senator Joseph F. Guffey of Pennsylvania that they had entered into "an unholy alliance" with northern Republicans to defeat the Democrat-sponsored absentee service men's voting bill and substitute a "State rights" measure, and with an anti-poll tax fight in the offing, they called for organization of a Democratic Party of the South. Senator Harry F. Byrd of Virginia was put forth as a potential nominee for the Presidency, though not by his own initiative.

A further breaking of the Republican isolationist lines was another sign that colored the political scene, bringing the two major parties closer in international thought and leaving domestic problems and "New Deal bureaucracy" a separate issue to be fought out in the campaigns. This, it was held, gave the Republicans, flushed with victories in off-year elections (see ELECTIONS), especially in Kentucky, an advantage, or at least a new encouragement.

The Republican Postwar Advisory Council, meeting in September on Mackinac Island, Michigan, put to rout the unofficial Republican Postwar Committee which was organizing throughout the country to give emphasis to and then remove the isolationist brand from the party. It produced a resolution, much of the spirit of which was viewed by Republicans as having been written into the Senate (Connally) resolution on postwar peace policy in November and into the Four-Nations Declaration of Moscow.

Strenuous efforts were being made to make an avowed presidential candidate of Gov. Thomas E. Dewey of New York, despite his repeated declarations that he was not an aspirant. In December, after Alfred M. Landon, 1936 GOP standard bearer, on the basis of soundings in many parts of the country termed Mr. Dewey the No. 1 prospect, the New York Governor submerged himself into a "no comment" status. State GOP leaders increased their pressure upon Dewey. Gov. John W. Bricker of Ohio, the first to announce, said on October 30 that he would enter his State's primary in May; Harold E. Stassen, former Governor of Minnesota, a naval officer on active service, was entered for the Nebraska primary in April, 1944. Mr. Willkie and Gen. Douglas MacArthur, on whose behalf clubs were being formed in various sections of the United States, remained as possibilities.

The vote of service men figured strongly in the calculations of both major parties and means were sought, particularly by Democrats, to have it play a prominent role in the election of the President, Vice-President, and the Seventy-ninth Congress. Under the sponsorship of Senators Green of Rhode Island and Lucas of Illinois, the Senate Committee on Privileges and Elections brought out a bill in November to streamline absentee balloting procedure radically. Where the 1942 Soldier Voting law had brought in only 28,000 votes, the Green-Lucas measure anticipated armed service votes from every battle station and home camp by millions. On December 3, after spending six days rewriting the Green-Lucas bill on the floor, the Senate, voting 42-37, threw it away and passed a substitute sponsored by three southern Democrats, Senators Eastland of Mississippi, McKellar of Tennessee, and McClellan of Arkansas, which would turn the entire service voting program back to the States. Though southern Democrats and northern Repub-

licans were blamed by Administration men for this action (asserting that poll tax preservation was the motive) the sectional partisans accused actually represented only one-third of the vote that caused the upset. The Federal program was alleged to be unconstitutional. It appeared, from debate, that if it should be finally adopted it would be challenged in the courts and possibly throw the Presidential-Congressional election into controversy and confusion. The legislation, sent to the House, was still in committee when the session ended.

Agencies. See the articles on the above-mentioned and other leading government agencies; LAW under *Supervision of Federal Agencies*, and other topics listed under GOVERNMENTAL CONTROLS; agency chart on preceding pages.

POSTWAR POLICY ISSUES

From the beginning of the year there was a consciousness in Congress that it should express itself to the nation and to the world on the question of cooperation by the United States with the Allied nations in the postwar period to preserve the peace for which the war was being waged. Resolutions poured in, some calling for specific commitments, others general or even vague. A special subcommittee headed by Senator Tom Connally, chairman of the Foreign Relations Committee, was organized in March to study a dozen proposals, among them the controversial Ball-Burton-Hatch-Hill (B2H2) measure which envisaged a postwar international organization akin to the League of Nations, equipped with an international police force.

Though the subcommittee stepped lightly lest its product provoke debate that would offend Allies, the months that followed saw both houses of Congress, acting separately but voting in great unison, give overwhelming approval to expressions that dovetailed into the diplomatic and political movements and actions of the executive branch of the Government. Senate debate was frank, at times bitter, disclosing that a form of "nationalism" remained in the wake of isolationism. But the fears of those who had sought indefinite postponement of the facing of postwar policy issues appeared to have been overemphasized. Rather than injuring military, diplomatic, or political programs, the carefully phrased and carefully handled House and Senate resolutions concededly aided Secretary of State Cordell Hull on his historic mission to Moscow in October that produced the Four-Nations Declaration and led up to the Big Three meetings at Cairo and Teheran.

The House, usually on the outside in such matters, took the initiative in postwar peace policy expression. Taking Congress by surprise, the Foreign Affairs Committee, headed by Representative Sol Bloom of New York, voted unanimously in June to report out a resolution composed by a rookie member of the House, J. William Fulbright, Democrat of Arkansas. It was brief, but all-inclusive, reading (as amended by only a few words to insure international agreement by constitutional processes) as follows:

Resolved by the House of Representatives (the Senate concurring) that the Congress hereby expresses itself as favoring the creation of appropriate international machinery with power adequate to establish and maintain a just and lasting peace among the nations of the world, and as favoring participation by the United States therein, through its constitutional processes.

The House passed it by a 360-29 vote on September 21. The Senate Foreign Relations subcommittee went to work on a measure of its own, but it proceeded slowly, dreading not only possible de-

bate repercussions but a concurrent resolution routine which would require conference adjustments and a carrying of the issues to the floors a second time. Desiring to avoid a blueprinting of commitments while the postwar picture still was necessarily vague, the subcommittee on October 13 reported to the full committee a Senate resolution declaring:

Resolved, that the war against all our enemies be waged until complete victory is achieved; that the United States cooperate with its comrades in arms in securing a just and honorable peace; that the United States, acting through its constitutional processes, join with free and sovereign nations in the establishment of international authority with power to prevent aggression and to preserve the peace of the world.

Senator Connally introduced it, saying to the B2H2 group, "this is the best you can hope to secure." The group, which sought a "stronger" measure, however, won at least a partial victory with the aid of Secretary Hull, given unwittingly in Moscow. The Four-Nations Declaration (in which China had joined the United States, Great Britain, and Russia) called for "a general international organization" to maintain the peace, a phrase viewed widely at the Capitol as fitting more by word than by the implications of the Committee (Connally) Resolution, into the program advocated by the Ball-Burton-Hatch-Hill group. Peace descended upon the Senate in mid-debate, and compromise was reached. Article 4 of the Moscow Declaration (covering the projected "general international organization") was written virtually without change into the Senate resolution. After inserting further language to safeguard its prerogatives to ratify treaties, and calling for postwar agreements to take treaty form, the Senate, on November 5 (vote, 85-5) gave its approval, in effect, to the Moscow Declaration in its own instrument. A new League of Nations was seen widely as being on the way. On December 6, Secretary of the Navy Knox, in an address before the English Speaking Union of Chicago, described the wartime working arrangement of the United States and British navies the "backbone" of "our postwar naval police force, already organized and functioning." This was accepted generally as a voicing of Administration policy.

Since August, 1941 (Atlantic Charter) the meetings between President Roosevelt and Prime Minister Churchill of Great Britain had become mileposts in the progress of the war. Each meeting resulted in a new turning point, a new battle strategy or grand plan or political decision of great moment. Washington reacted to their accomplishments, and the nation with it, with great enthusiasm. The decisions had been of a nature with which Americans had no inclination to disagree. From Cairo (Roosevelt-Churchill-Chiang) there came an answer to those, in Congress and out, who had argued that China was being neglected and the Japanese given only a token war while the concentration was upon the Nazi enemy. From Teheran there were further assurances that there would be no separate peace between Russia and Germany, and that a Second or even a Third Front had been agreed upon and was simply awaiting the proper target dates. These were the questions that the people of the United States wanted answered, almost above all others.

To prevent recurrences of the monetary problems arising out of World War I, plans underwent study by the executive and legislative branches, programs contemplating stabilization of currency and providing readier access to foreign exchange. The chief one followed the 1936 tripartite program of the

United States, Great Britain, and France, calling for an International Stabilization Fund of \$5 billions, capitalized in gold, foreign exchange, bonds, and other contributions by participating governments, upon which each could draw to the extent measured by its participation. A new international currency, *Unitas*, would be established. A British plan, brought out by a group headed by Lord Keynes, proposed an international clearing house without assets, but through which members could borrow foreign exchange under a quota based on foreign trade during the last three years of peace. This organization's currency would be *Bancor*, valued in terms of gold, which could be bought with gold, though gold could not be bought with *Bancor*.

On October 8 the U.S. Treasury announced plans for a \$10-billions United Nations Bank for postwar reconstruction and development to augment the proposed international Stabilization Fund. This institution, taking a form similar to that of the RFC, would encourage private financial agencies to provide long-term capital for the proper development of productive resources of member countries. When necessary it would supplement private capital to further the program. Member countries would pay 20 per cent of their capital participation at the beginning in gold and currency. When the bank required additional capital it would call for supplementary payments on capital quotas, up to a limit of 20 per cent in a single year. Ten days later Secretary of the Treasury Morgenthau arrived in Algiers on a tour to place the programs before Allied Governments.

With the feeding of the postwar world a problem to be recognized long before the battles were fully won, representatives of forty-four nations representing 80 per cent of the world's population gathered at Hot Springs, Va., in May in a conclave made notable for its secrecy in discussion and program. Of all the nations represented, the United States was probably the only one which could provide, within itself, a complete healthful diet for its citizens. Plans tentatively agreed on were taken home for scrutiny. On November 10 the delegates met again, at the White House, and signed a formal agreement pledging their countries to cooperate, according to the ability of each, in feeding the peoples of the postwar world. The United Nations Relief and Rehabilitation Administration (the UNRRA) was created, with Herbert H. Lehman, former Governor of New York, as its director general. Work and planning was done at Atlantic City. The immensity of the job ahead was indicated by findings at the outset that Allied Europe would need 45,855,000 metric tons of imported goods for minimum requirements during the first six months after freedom from Nazi domination, of which 23,485,000 tons must go in ships. The cost of the entire program was estimated at \$2,500,000,000 with the United States share being from \$1 billion to \$1½ billion, and the United Kingdom's about \$625 million. About 90 per cent of the United States contribution, it was emphasized, would be spent for goods in this country.

For further detail in international developments, see UNITED NATIONS.

Reconversion of American war industry back to peacetime production status figured in all domestic postwar planning. Bills began appearing before the first Congressional session ended. Recommendations for an entire legislative program were shaping up for presentation early in 1944. With the United States having filled the seas with war

shipping, many interests, governmental and otherwise, cast eyes toward the postwar period. Experts of the International Transport Committee, United States Chamber of Commerce, gathered in Washington in September and found that a plan already was at hand in the Merchant Marine Act of 1936. It provided for private ownership and operation of steamship lines. Plans went forward on that basis. The war-accelerated expansion of aviation prompted steps to consolidate gains. American money and labor had established air bases at many strategic points throughout the world, and steps were being taken to preserve them, not only for military security but for postwar world trade by air. Within the United States the airlines, which, like the railroads, had stepped with mighty force into war and strained to new capacities, went to work on postwar plans that gave promise of service reaching into communities never before touched by air travel. As in the case of shipping, aviation built its programs upon the principle of private enterprise. (For postwar proposals initiated by industry and other non-government groups, see POSTWAR PLANNING.)

Security. Sir William Beveridge attained world interest at the start of the year with a cradle-to-grave British social welfare plan, calling for a minimum weekly income for all during unemployment periods, maternity benefits, full medical services, and respectable burial. An "American Beveridge Plan" on which the National Resources Planning Board, headed by President Roosevelt's uncle, Frederic A. Delano, had worked many months, was opened up to the United States soon afterwards. The President, giving it to Congress, suggested consideration at the current session, but it was not acted upon. Going beyond the British plan at points, the American proposals covered work on manifold Federal projects, Government "partnership" in private enterprise, and insurance to cover many economic hazards. Cost was not estimated. The plan, in effect, was introduced in June by Senator Wagner of New York, chairman of the Senate Banking and Currency Committee. The program would be financed at first principally by employers and wage earners to cover unemployment insurance, medical care, old-age, and disability benefits. It would expand the existing Social Security program to include approximately 15,000,000 farmers and agricultural workers, domestic servants, and professional and "little business" men. (For present Social Security set-up, see SOCIAL SECURITY BOARD.)

Veterans. Although the war was at its height, nearly 1,000,000 service men, whose economic lives had undergone abrupt dislocation had been discharged. New problems arose and programs came forth.

In response to general Presidential recommendation, the Senate on December 17 passed a bill to provide mustering-out pay, ranging from \$200 to \$500, depending upon length and place of service, to honorably discharged veterans, men and women, up to and including the rank of colonel or comparable rating. House consideration was likely early in 1944. Mr. Roosevelt also urged "early action" on an educational program for discharged service men, financed by the Federal Government but administered by States and local communities. The first report of the Armed Forces Committee on Postwar Educational Opportunities for Service Personnel, appointed nearly a year before, formed the basis for the President's recommendation. The cost was estimated at about \$1 billion. This would supplement the legislation

designed to provide for credits on social security participation during war absences and for unemployment benefits ranging from \$15 to \$25 a week, according to dependency status. (See also VETERANS' ADMINISTRATION.)

FOREIGN RELATIONS

On the first anniversary of the Pact of the United Nations, President Roosevelt said: "Our task on this New Year's day is three-fold: First to press on with the massed forces of free humanity until the present bandit assault upon civilization is completely crushed; second, so to organize relations among nations that forces of barbarism can never break loose; third, to cooperate to the end that mankind may enjoy in peace and freedom the unprecedented blessings which Divine Providence through the progress of civilization has put within our reach." Thus, he sounded the policy upon which bold diplomatic strokes (some creating doubt and apprehension but most appearing justified by developments) were based, and which guided the nation and its Congress toward the closest harmony, as to foreign relations, that had been known in generations.

The foreign relations program was put upon a long-term basis. Postwar views were sought and received from many quarters through conferences in Washington with Anthony Eden, British Foreign Secretary; Gen. Henri-Honoré Giraud, who had won favor with the Administration in the fast-changing French political situation, and other distinguished visitors and consultants. Accent was on the reinforcement of understanding with Russia, which, despite that nation's tremendous sacrifices and valiant battle successes over Germany, had been endangered by words and incidents to a point where, in March, Vice-President Wallace asserted that "unless the Western democracies and Russia come to a satisfactory understanding before this war ends, I very much fear that World War No. 3 will be inevitable. Without a close and trusting understanding between Russia and the United States there is a grave probability of Russia and Germany sooner or later making common cause."

During the seeking of harmony among nations it was brought into the open in August that harmony was lacking within the State Department itself. While the *general* foreign relations policy of the Government was clear and known to the world, differences over specific policies relating to many individual international problems, it was asserted, developed to an extent that impaired the efficiency of this vital department. A break between Secretary Hull and Sumner Welles, Under Secretary of State, was known to observers to be coming and it came, openly, on September 25 when Mr. Welles resigned. President Roosevelt appointed Edward R. Stettinius, Jr., the youthful industrialist who had come to the Government war establishment first as a key man in the production field and later became Lend-Lease Administrator, in Mr. Welles' place.

While the Government was compelled to tread cautiously in many of the situations which developed between the explosive French factions, it struck decisively late in April at strategically situated Martinique, having lost patience with Vice Adm. Georges Achilles Marie-Joseph Robert, High Commissioner of Martinique (q.v.) and Guadeloupe, who since the fall of France in 1940 had enveloped his aims and programs in mystery. Severing diplomatic relations, the State Department announced that the Government would not "rec-

ognize or negotiate with any French Republic in the Antilles who remains subservient to or maintains contact with the Vichy regime." This got results with the French with whom the Government had been dealing. Robert disappeared from the picture.

The French political and military situations were as shifting as the sands, moving from one delicate and discouraging aspect to another, but with heartening developments occurring periodically. There was no turning from the Allied policy of seeking the cooperation of all anti-German French groups and bringing together the rival Giraudist and deGaullist factions. See *FRANCE* under *History*.

American diplomacy had sought to avoid politics in this problem. It got politics. But, be it emphasized, though it dealt in its bewildering complexities with conflicting personalities, it found true Frenchmen on both sides.

At times the zeal of the French led to situations that threatened disruption of the whole Mediterranean situation, when it appeared that the careful seeking of Arab cooperation with the Allies would erupt into chaos and tragedy. The Levantine disturbances in November presented such a danger. See *SYRIA AND LEBANON* under *History*.

As the year closed the agreement reached between the late Adm. Jean François Darlan and Lieut. Gen. Mark W. Clark soon after the Allied landings in North Africa was being revised, at the request of the French Committee of National Liberation, to eliminate provisions which the deGaullists thought impaired French sovereignty.

A small, proud woman brought the United States closer to an understanding of China's long and brave fight for all democracy. Mme. Chiang Kai-shek, wife of the Generalissimo, visited the White House in February, appeared before Congress for two history-making addresses and later, despite serious illness, toured the country. To the lawmakers she spoke bluntly. She had found that opinion seemed to consider defeat of the Japanese relatively unimportant until Hitler was beaten. This, she said, was "not borne out by the facts." Mme. Chiang hit upon a controversy that had waged for weeks within Congress, where some believed the United States should even withdraw forces from Atlantic and Mediterranean theaters to launch the full-scale assault upon Japan. Later developments showed that the defeat of the Japs had not been "relatively unimportant" and that the massing of men, machines, and materiel had been constant. When the tempo of the offensive against Japan was accelerated it was with great effect, though the terrible cost of the slow but steady movements toward the heart of the Japanese Empire was brought home with stinging effect with the capture of Tarawa, in which the U.S. Marines "paid the stiffest price in human life per square yard of any action in the 168-year history of the Corps."

Congress, upon recommendation of the President, acted in November to rectify "a historic mistake" by erasing from the statutes all Chinese Exclusion Laws, some reaching back to 1882. Thus a second gesture toward the Asiatic ally was made within a year, the United States having joined with Great Britain in 1942 in renouncing the extraterritorial rights in China that had prevailed for a century.

Only two Latin American countries remained neutral as 1943 began, but in the first month Chile broke relations with the Axis, leaving Argentina the lone neutral among 21 American republics. Bolivia (in April) and Colombia (in

November) went beyond mere severing of relations and declared war. On June 4, the Government of Argentina (q.v.) was overthrown, for the seventh time, by revolution. President Ramon S. Castillo, who had maintained a state of siege since Pearl Harbor, gave over Casa Rosada, the Government House at Buenos Aires. Gen. Pedro Ramirez, the new President, who had been counted on to break with the Axis, gave no signs of doing so. Argentina appeared to want to bargain for Lend-Lease equipment. Foreign Secretary Segundo Storni in August suggested "a gesture of friendship" in the form of United States lend-lease arms and oil-drilling machinery. Secretary Hull, in response, rebuked the Argentine Government for requesting arms for a purpose inconsistent with "the juridical and moral" bases of Pan American understandings and agreements. His blunt reply shook the Ramirez Government to its foundations and increased the tension with Washington. See *ARGENTINA* under *History*.

Revolution also came upon a republic that had broken early with the Axis, Bolivia. On December 20 a swift military coup by a group of army officers headed by Victor Paz Estenssoro, ex-Minister of Economy, ousted President Enrique Peñaranda and placed a mixed army-civilian junta in power. Assurances were given promptly that the action was in no wise hostile to the United States. Official Washington did not appear to be disturbed at first. Soon, however, there developed a possibility that the revolution had been Axis-inspired. The State Department withheld recognition as further investigation indicated that Axis plotters were involved. See *BOLIVIA* under *History*.

United States relations with Latin America were jolted in late November when Senator Hugh A. Butler, Republican of Nebraska, after a tour through 20 Central and South American republics, delivered a 176-page report to the Senate alleging that the U.S. Government was lavishing \$6 billions on wasteful projects that were spawning contempt and suspicion for the United States. Most of the projects, he held, had little or nothing to do with the war and were arraying nation against nation. Vice-President Wallace denounced the report as a "shocking slur." Senator McKellar, acting chairman of the Senate Appropriations Committee, after having received official rebuttals from all government agencies involved, reported that Senator Butler had been shown to be "95 per cent wrong." Secretary Hull, in a formal statement, called the Butler report a "wholly indefensible attack" on the Good Neighbor policy through "inaccuracies, fallacies, misstatements and gross representations." A House Military Affairs subcommittee returning from a base-inspection tour in Central and South America, reported that the Good Neighbor policy had produced mutual benefits throughout the Western Hemisphere, but contended that "bungling tactics by amateur goodwill emissaries who bid against each other have created confusion and injured American understanding."

See the articles on all foreign countries under *History*.

CONGRESS

The first session of the Seventy-eighth Congress convened on January 6 and adjourned formally December 21, closing the first materially broken meeting since 1938. Weary and jagged, it had taken a 67-day midsummer recess from July 8 to September 14. The second session will convene Jan. 10, 1944. The Senate, at the end of the first session, had a membership of 58 Democrats, 37

Republicans, and one Progressive; the House of Representatives, 218 Democrats and 208 Republicans (in 1934 there were 322 Democrats to 103 Republicans and 10 representatives of minor parties), two Progressives, one Farmer-Laborite, one American-Laborite, and five vacancies. The vacancies had deprived the Democrats of four votes and the Republicans one. Thus, the Democrats, as the second session was about to start, had a numerical majority of a single vote, a situation strange to the Roosevelt Administration. (For a list of members, see HOUSE OF REPRESENTATIVES and SENATE.)

The President of the Senate was Vice-President Henry A. Wallace, the majority leader Alben W. Barkley of Kentucky, and the Democratic whip Lister Hill of Alabama. Charles L. McNary of Oregon was the minority leader, but Wallace H. White, Jr., of Maine, was acting minority leader because of the illness during the closing weeks of the session of Mr. McNary. The Speaker of the House was Sam Rayburn of Texas, the majority leader John W. McCormack of Massachusetts, the Democratic whip Robert Ramspeck of Georgia. Joseph W. Martin, Jr., of Massachusetts was minority leader. Leslie C. Arends of Illinois was minority whip.

Work of Congress. The Seventy-eighth Congress called itself the "Victory Congress." Sons of its members appeared on the casualty lists. Political parties, as such, were forgotten as issues involving the actual fighting of the war and cooperation with the Allies for preservation of peace, when it comes, arose. The unity that marked the pledges and expressions for postwar collaboration, which came in almost perfect timing with diplomatic and political developments abroad, astonished even the most optimistic of the veteran participants and observers on Washington's Capitol Hill. The session's principal completed acts were those of appropriations, authorizations for prosecution of the war, taxation (to the extent it thought feasible), and strike control. The fighting fronts and the domestic front, however, were kept quite separate and distinct in the record of the first session of the Seventy-eighth.

It adjourned leaving several major controversies, some of them involving the critical issues of holding the anti-inflation line, still in hot progress. Whether the Congress would approve an expanded food subsidy program for rolling cost-of-living prices back was left in abeyance by a 48-day extension of the existing one. Whether Congress would support a wage increase for 1,100,000 non-operating railway workers, rejected by the Director of Stabilization as inflationary, was an issue that was confounded by sudden Government seizure of the railroads (the Senate already had approved the rise). Congress was split bitterly over methods of enabling absentee service men to participate in the election next year of the President, Vice-President, and the Seventy-ninth Congress. Legislation providing mustering-out pay to honorably discharged veterans was only partly completed. Many postwar problems awaited study and recommendations.

Under the pressures of war Congress appropriated lavishly, then began scrutinizing its works, setting up accountancy systems of its own to go into the "justifications" of departments and agencies. The policy was found to be wise. No department or agency suffered from a lack of necessary funds; some found, on their own account, that they had overestimated their requirements, the War Department by at least \$13 billions. The

Byrd Economy Committee, finding almost \$100 billions in uncommitted balances held by the War and Navy Departments alone, set out to discover how much could be returned to the Treasury.

Congress realized the prerogatives and responsibilities of the executive branch in the conduct of the war, but it drew its lines. On the domestic front it was critical and at times belligerent. Among the most severe of the critics of domestic programs were Democrats. These, with the growing force of Republicans in both Senate and House, imperiled or defeated home front projects where the issues concerned what were denounced as "coddling" of labor, bureaucratic "government by directive," abuses of delegated powers by agency heads and "ideologists down the line," and Administration methods of combatting inflation by means of consumer subsidies. As to taxes, partisanship again appeared to lose its identity in a general Congressional disagreement with the President and the Treasury Department over the extent to which levies upon income, individual and corporate, should be imposed. This disagreement was sharp. Congress set out to give the Administration only one-fourth of the revenues it had asked. The second tax bill of 1943 was still pending when 1944 began with no signs of compromise evident.

Direct appropriations during the session totaled \$114,592,591,235, with \$59,034,839,673 approved for the Army July 1, following \$27,637,226,198 for the Navy (on June 26), which later was augmented by \$3,836,176,119 in a supplemental allotment. The other war agencies were given \$2,911,697,224 (July 12) and an additional \$6,273,629,000 was voted for Lend-Lease and approved June 14, after Congress, observing the growing reciprocity of this unprecedented program, had approved its continuance for another year. Yet, a few months later a special Senate Appropriations group, named after Senators touring battlefronts had made their report, was investigating all Lend-Lease outlays (then nearing \$24 billions), not begrudgingly but to see that it had been administered in keeping with the spirit of its authorizations.

With United States crops now vital to the whole world, Congress in May put \$26,100,000 into recruiting, training, and transporting a land army, and supplemented this with \$30,000,000 more in December. It first permitted 225,000,000 bushels of wheat to sell at the parity of corn to feed meat-producing livestock and poultry (in March) and increased the allowance in June to 275,000,000 bushels. It balked, through its powerful farm groups, at the Administration's consumer subsidy program in the summer, and again in the autumn, and left the issue open when the Christmas recess set in. The Commodity Credit Corporation, principal subsidy-paying instrument, went forward until Feb. 17, 1944, but under pledges that it would not subsidize beyond a rate of some \$1 billion a year, or include new commodities. The Administration contended that it must go further to combat inflation effectively.

With no hesitation Congress permitted the legal debt limit to rise from \$125 billions to \$210 billions in April (the debt had been \$26 billions at the end of World War I, and down to \$16 billions in 1930, and up to \$49 billions by 1941), but it added a rider to the authorization which prompted the President to take it without endorsement by signature. By this rider Congress, in effect, repealed the President's executive order which sought to hold the maximum individual earnings of any unmarried individual to approximately \$25,000 a

year, after taxes, or a married one to \$50,000. Congress extended to June 30, 1945, the \$2-billion exchange Stabilization Fund, built from proceeds of 1934's dollar devaluation, but concluded as of June 23, 1943, the President's power to alter the gold content of the dollar, which had been given in the Agricultural Adjustment Act of 1933. In July it enacted legislation to curb the activities of "contract brokers" who had built up a nationwide practice declared to be wholly unnecessary for the procurement of war business. Though trade routes were disrupted or paralyzed by war hazards, Congress extended the reciprocal Yankee Trading program of Secretary of State Hull for two more years with rousing majorities.

There were two tax bills in 1943, but only one was enacted. The first was completed late in May, the other left for 1944 decision. The pay-as-you-go plan of Beardsley Ruml featured the first contest. Means of bringing a large segment of American taxpayers to a current payment basis was accomplished, but with a compromise that brought new confusion to higher-bracket income taxpayers. (See **TAXATION.**)

On October 1, the Treasury, seeking \$10,500,000,000 of new money, put before the House Ways and Means Committee a program for income taxes starting at 21 per cent (instead of 13 per cent) and a lowering of personal exemptions to raise an estimated \$6,600,000,000, the rest to be made up by increased corporate levies, excise imposts, and estate and gift taxes. The committee rejected the program as "an intolerable burden" and Chairman Doughton took a \$2,139,300,000 bill before the House, terming the \$16 billions inflationary gap of which the Administration warned "a statistical abstraction" and declaring that too heavy a tax burden was "as great a danger to the nation's economy as is a too large public debt." The House, agreeing, took the bill.

The Senate Finance Committee increased the potential yield by \$136,300,000 and moved to freeze social security taxes at the existing 1 per cent rate for another year. It rejected the Treasury's proposals to integrate the Victory tax with regular income levies, which would have removed 9,000,000 taxpayers from the rolls, and the House-adopted plan to repeal the Victory Tax and increase the normal rate from 6 to 10 per cent and provide a special 3 per cent impost on the lower income groups.

Congress, suspicious of uses made of the well-stocked special emergency fund given the President (as some Administration agencies upon which Congress had frowned and to which it had cut or denied appropriations kept on functioning) put limitations upon its use, excepting, of course, the meeting of war emergencies. Acting more directly, it denied funds for the continuance of the National Resources Planning Board, though it had just submitted the "American Beveridge Plan"; ordered the National Youth Administration, long a controversial organization because of its alleged Communist leanings, disbanded, and terminated the Guffey Bituminous Coal Act and the machinery it created to stabilize the industry. It decreed the liquidation of the Home Owners Loan Corporation as rapidly as would be safe to American realty markets and brought the WPA program to an abrupt halt on July 1.

Investigations. Although Congress had kept away from the actual conduct of the war, leaving this to the executive branch, it sponsored an investigation that reached to all the fighting fronts of the global war. The Senate sent five of its members

(Russell of Georgia, Chandler of Kentucky, Mead of New York, Democrats, and Lodge of Massachusetts and Brewster of Maine, Republicans) on a tour covering approximately 40,000 miles. Their findings, reported in secret sessions where secrecy did not hold, provoked controversies and repercussions abroad, but the Washington consensus persisted that the investigation had done much, here and overseas, to promote understanding between the United Nations. The committee returned with criticisms, some of which were misinterpreted abroad, for they were meant to be directed more at the shortcomings of the United States' representatives overseas than at operations and preparations of the Allies.

The Senators reported that members of the United States missions overseas lacked alertness and were left standing by, perplexed and ineffective in this move and that, while representatives of Allied nations appeared to be gaining economic advantages that would reflect to American disadvantage in postwar readjustments. The principal reason for this, the Senators contended, was a distinct lack of national policy on the part of the United States. American labor and money had built military bases to which the United States would have no postwar rights, lend-lease materials were being distributed under a system which left in doubt the true donor, United States zealots were spending heavily "to sell the Indians on the American way of life"; these and other reports were brought back to the Senate.

It was a year of many Congressional investigations. The Senate (Truman) Committee continued delving into many phases of the war program, revealing that, besides waste of public funds in the production of material, the Army itself could (and did) reduce materially the wastage of food. It found that, through falsifications, defective materials had gone into some aircraft, that steel-making specifications had been misrepresented, that labor and management both shared responsibility for failure to meet aircraft production schedules, that the Army, under wraps of military secrecy, had spent \$100,000,000 on a \$134,000,000 oil development in Canada which it asserted to have little if any military value. It warned that the nation's transportation system, under its greatest war stresses in history, faced possible breakdown through a lack of replacement equipment. These are only random samples.

The Senate (Kilgore) Committee, finding a need for decisiveness in policies, sought a concentration of civilian authority to replace the divided powers that headed up the manpower, production, and procurement programs of the war. To an extent that remained to be determined at the end of the year its recommendations came true with the establishment of the Office of War Mobilization.

The Byrd Congressional-Departmental Joint Economy Committee continued to score through constant batterings against excessive Government employment (the Federal establishment rolls were cut to far below the 3,000,000 peak of earlier in the year), continuance of expensive sociological programs, the Government's enormous realty operations, and practices in general that were deemed to stifle private enterprise and individual initiative.

Many excursions into alleged abuses by officials and subordinates of powers delegated to the executive branch by Congress were made by the House (Smith) Committee, which reported, as one example, that the OPA had set up "a government of its own," with executive, legislative, and judicial

branches, and called for the rewriting of the Price Control Act to protect the people from its edicts.

The House (Dies) Committee on un-American Activities investigated evidences of "coddling" of Japanese evacuees, a large part of them assertedly openly hostile to the United States, at the Tule Lake, Calif., center, where outbreaks of disorder occurred. The House (Kerr) Committee, which prompted Congress to remove three minor officials from the Government payroll because of past identification with allegedly subversive groups, faced a court test of the constitutionality of its action. At session-end, the special Senate (Van Nuys) Committee assigned to see whether prevailing liquor shortages were real or artificially created, was in the midst of its probings, while the House committee investigating the Federal Communications Commission continued its work under the chairmanship of Representative Lea of California, after Representative Cox of Georgia, who had initiated the inquiry, resigned "to free the committee" of personal attacks which had been made against him.

Enactments. There follows a brief summary of important measures enacted during the First Session of the Seventy-eighth Congress:

War Labor Disputes Act, vetoed by President Roosevelt June 25 and enacted over his veto the same day: Presidential powers to take over plants under Sec. 9 of the Selective Service Act of 1940 were extended to any plant, mine or facility equipped for the manufacture, production, or mining of articles required or useful to the war program, and may be exercised where there exists an interruption of operations due to strike or other labor disturbance. Plants so seized must be returned to owners as soon as possible, but in no case more than 60 days after resumption of prior productive efficiency. It is purely a wartime measure. It gives statutory status to the National War Labor Board, which had been "ignored" by John L. Lewis, president of the United Mine Workers as only a creature of Presidential executive order.

During possession of a plant or mine the terms and conditions of employment remain as those in effect at time of seizure, but the Government agency operating it is given authority to apply to the National War Labor Board for a change in wages or conditions of employment and the board, after hearing, is authorized to order fair and reasonable adjustments. It is unlawful for any person, association, or corporation to coerce, induce, conspire with, encourage, or aid any lockout, strike, stoppage, slowdown, or other work interruption, or for any person, association, corporation, or other group to interfere with operations by giving direction or guidance, providing funds or the payment of strike or other unemployment benefits to participants, with violators being subject to fines up to \$5,000 or imprisonment up to one year, or both. Upon its own motion or when the U.S. Conciliation Service certifies that a labor dispute exists that may interfere substantially with the war program, the NWLB is authorized to take jurisdiction and decide the issues, but must conform in its decisions to the Fair Labor Standards Act, the National Labor Relations Act, and the Emergency Price Control Act. The act requires that notice of labor dispute which threatens production be given to the Secretary of Labor, the NWLB, and the National Labor Relations Board and that for not less than 30 days the contractors and workers continue production without interruption. On the thirtieth day, if the dispute is not settled, the NLRB is required to conduct a secret strike ballot

among the employees involved. See *LABOR CONDITIONS under Federal Labor Legislation*.

Fathers Draft Act, signed December 10: This law seeks to place pre-Pearl Harbor fathers (parents of military age with children born before Sept. 15, 1942) at the bottom of the military manpower pool on a nationwide basis, but provides that the rule shall not apply with such rigidity as to prevent the regular required flow of inductees into the armed forces. It proposes to do away with the "work or fight" program through which the War Manpower Commission sought to shunt military-age registrants, regardless of marital or dependency status, either into essential war occupations or into the draft by means of nondeferable lists. It proposes that a medical commission, with civilian representation, be created to determine whether physical, mental, and moral requirements of the army and navy can be lowered with safety so as many as possible of the 3,400,000 registrants in 4-F classification, rather than fathers, may be inducted. See *SELECTIVE SERVICE SYSTEM*.

Servicemen's Dependency Allowance Act, signed October 26: Amending the law of 1942, it increased allowances and extended the benefits to all grades of enlisted men and established a new grade of dependents (Class B-1) consisting of parents, brothers, or sisters dependent upon the enlisted man for their chief support. For Class A dependents (wife, children, or divorced former wife) the allowance remains at \$50 a month, but for the first child it was raised from \$12 to \$30, and the allowance for each additional child was raised from \$10 to \$20.

Veterans' Rehabilitation Act, signed March 24: Extends to those serving in the armed forces during the present war the veterans' pension laws of the first World War, subject to the provisions, regulations, and limitations of Veterans' Regulation No. 1 (a), Part VII. It provides that veterans be rated as totally disabled and entitled to compensation on the basis provided under the World War I Veterans Act of 1924 during a course of training which shall not exceed four years, nor receive training beyond six years after termination of the war. A \$5,000,000 revolving fund is provided for making advances, not exceeding \$100 each, to trainees.

Naval Courts Martial Act, signed March 22: Extends jurisdiction of naval courts martial, in wartime, to all persons serving with or accompanying the U.S. Navy, Marine Corps, or Coast Guard, persons engaged in naval projects and within areas under control of the Secretary of the Navy.

Lend-Lease Appropriations Act, signed June 14: Appropriated \$6,273,629,000 to carry out the provisions of the Lend-Lease Appropriations Act of Mar. 11, 1941. The 1943 fund was made available until June 30, 1944, its major items being \$4,452,623,000 for agricultural, industrial, and other commodities; \$1,552,659,000 for ships, vessels, boats, and other water craft, equipment, supplies, materials, spare parts, etc., and \$8,999,000 for administration. A provision was inserted to prohibit use of the money for the payment of any subsidy on agricultural products produced in the continental United States. See *LEND-LEASE PROGRAM*.

Current Tax Payment Act, signed June 9: This measure changed the system of tax payments but not the basic rates or exemptions. It provided for collection at the source from wages or salaries at a rate of 20 per cent above withholding exemptions, beginning July 1, 1943, and for current payment of liabilities not collected at the source on the basis of quarterly declarations. Three-fourths of

the 1942 tax liability was cancelled, with the remaining quarter payable in two equal installments in March of 1944 and 1945. The additional yield of revenue for 1944 was estimated at about \$5,000,000,000, carrying total collections to some \$18,000,000,000.

The withholding tax was designed to include the Victory Tax, plus the normal levy and the first bracket of surtax. Exemptions are \$624 for an unmarried person and \$1,248 for a married person, and \$312 for each dependent. Employers are allowed to determine the amount to be withheld, on the basis of marital status information supplied by the employee, either by precise computation or by use of simplified tables. Employers are required to file quarterly returns but may remit withholding taxes monthly, under Treasury Department regulations.

As the withholding applies only to wages and salaries and not to discharge currently the tax liability in excess of the first surtax bracket, taxpayers with more than nominal income from nonwage sources and those whose compensation moved into higher brackets were required to make a declaration of estimated tax by March 15 each year. Payments of estimated tax (less the estimated amount withheld at source) are to be made quarterly. Farmers are allowed by regulation to file their declarations of estimated tax at any time prior to December 15 of each year because of the seasonal nature of their income.

The regular March and June tax installments were required as usual in 1943 (as the act was not passed until mid-year) but those payments were applied to the 1943 tax. Taxpayers whose current liabilities were not discharged in full by collection at the source were required to file a declaration by September 15, estimating 1943 tax and subtracting the amount paid in March and June, plus income and Victory tax withheld at the source for the year. Any balance was payable, one-half by September 15 and the rest by December 15. A final return for 1943 is due by Mar. 15, 1944, at which time under or over payment will be adjusted. See TAXATION.

Public Debt Act became law without the President's signature on April 10: This measure increased the statutory debt limit under the Second Liberty Loan Act from \$125 billions to \$210 billions. It rescinded, as of Oct. 2, 1942, the Presidential executive order (No. 9250) which sought to limit salaries to a maximum of \$25,000, after taxes. It also amended the anti-inflation act of Oct. 2, 1942, so as to provide that no action shall be taken under the authority of that statute regarding wages or salaries which would be inconsistent with the Fair Labor Standards Act or the National Labor Relations Act, or for the purpose of reducing wages or salaries for any particular work below the highest paid therefor between Jan. 1, 1942, and Sept. 15, 1942.

Dollar Stabilization Act, signed April 29: This extended to June 30, 1945, the powers conferred upon the President under Subsection (c), Sec. 10 of the Gold Reserve Act of 1934 relating to stabilization of the exchange value of the American dollar, but contained no provision for continuing the authority of the chief executive with respect to the gold content of the dollar (expired June 30, 1943). The act also provided that the Stabilization Fund shall not be used in any way under which its direct control and custody would pass from the President.

War Contract Fees Act, approved July 14: Sets out to prevent the payment of excess fees in con-

nection with the negotiation of war contracts. It authorizes departments involved in contracting to control fees received by manufacturers' representatives or "contract brokers" by defining their contracts or agreements with their principals as "subcontracts" under the renegotiation law. The definition of "subcontractor" is expanded to include agents who receive commissions or fees that are contingent upon the getting of government business, or those whose services consist of soliciting or procuring contracts or subcontracts. It includes those operating on salary or fixed compensation basis. All provisions are retroactive to Apr. 28, 1942.

Land Army Act, signed May 5: For the recruiting, training, and transporting and providing an adequate supply of workers for producing and harvesting agricultural commodities essential to the war program, the measure appropriated \$26,100,000, to be spent under the direction of the War Food Administrator, provided not less than \$9,000,000 nor more than \$13,050,000 be used to pay States for expenditure by the agricultural extension services. It prohibited the use of funds to impose minimum wages or hours, housing standards or enforce collective bargaining requirements or union membership except with respect to workers imported into the United States.

Reciprocal Trade Act, approved June 7: Extended to June 12, 1945, the authority of the President to enter into foreign trade agreements under Sec. 350 of the Tariff Act of 1930, as amended by the act of June 12, 1934.

War Shipping Amendments, signed March 24: Provides that officers and crew members employed by or on behalf of the United States through the War Shipping Administration, together with their dependents and beneficiaries have all the benefits, exemptions, privileges and liabilities of seamen employed on privately owned and operated American ships as regards death, injury, illness, maintenance, cure, loss of effects, detention, or repatriation, Federal Social Security, public health service and employment tax laws, allotments, collection of wages, etc. Those covered are not entitled to benefits of or subject to charges under the United States Employment and Compensation Act or Civil Service Retirement Act.

Philippines Presidency Act, signed November 12: This measure provided that notwithstanding provisions of the amended Constitution of the Philippines, Manuel Quezon, President, and Vice-President Sergio Osmeña (in exile) shall continue in office until the President of the United States proclaims that constitutional processes and normal functions of government are restored in the Philippine Islands. At that time the act provides, the tenure of President Quezon shall cease and the Vice-President become President until a successor is elected and qualified under the Constitution and laws of the islands.

Telegraph Merger Act, signed March 6: Provides authority for telegraph companies, upon approval by the Federal Communications Commission, to merge or consolidate in the public interest. It required the FCC to hold hearings at which representatives of governors of States involved, Secretaries of State, War, and Navy Departments, the Attorney General, and employees be heard. Consolidations would result in divestment of international operations within reasonable time. Employees on rolls on or before Mar. 1, 1941, would be continued in employment not less than four years from date of merger without reduction of compensation or assignment to work inconsistent with

their training or experience; those discharged as a result of a merger would be entitled to severance pay computed by multiplying the compensation they would have received for the full four-week period preceding the discharge by the number of years of continuous service immediately preceding. The act also protects pension, health disability, and death benefits, status of employees on military leave, and rights under existing collective bargaining agreements.

For other measures, see EDUCATION; FLOOD CONTROL; FOOD INDUSTRY; IMMIGRATION; NEWSPAPERS; SILVER.

Major Appropriations. Military Establishment Act, signed July 1: Appropriated \$59,034,839,673, with major items, beyond general upkeep, including: Air Corps, \$23,655,481,000; Signal Corps expansion, \$4,646,168,000; Service and Supplies, \$7,992,522,000; transportation, \$1,552,583,000; Engineers, \$2,472,401,500.

Naval Appropriation Act, approved June 26: Appropriated \$27,637,226,198, with principal items including \$1,735,880,000 for ships and maintenance; \$2,983,725,000 for aviation; (plus \$2,000,000,000 for contract authorizations); \$6,324,120,000 for increase and replacement of naval vessels; \$1,594,000,000 for armament and ammunition, and \$1,200,000,000 for emergency construction.

Supplemental Naval Appropriation Act, signed March 31: This appropriated \$3,836,176,119 to meet requirements of the Naval Reserve, Bureau of Ships, ordnance and stores, pay for naval personnel, the Bureau of Yards and Docks, naval aviation, armament and ammunition, and the Coast Guard.

National War Agencies Appropriation Act, approved July 12: Appropriated \$2,911,697,224 to meet the expenses of the score of war agencies functioning under the White House.

First Deficiency Act, signed March 18: Appropriated \$4,106,261,194, to increase the construction fund of the U.S. Maritime Commission, give \$3,250,000 to the National War Labor Board, \$685,000 to the Office of the Petroleum Administrator for War, and \$40,000,000 to the Public Roads Administration for access war roads.

C. P. TRUSSELL.

UNITED STATES COMMERCIAL CORPORATION. See United Kingdom Commercial Corporation.

UNIVERSITIES AND COLLEGES. According to the Educational Directory, published by the U.S. Office of Education, there were 1,702 institutions devoted to higher education in the United States in 1943. The

distribution of these institutions by type, student body, and control, and enrollment for the period of Oct. 15, 1942, through Oct. 15, 1943, are shown in the following tables.

It was reported that, exclusive of all military enrollments, 66,000 men and 152,000 women entered colleges for the first time in the fall of 1943, as against 203,640 men and 149,900 women in 1942. The enrollment of nonmilitary students in 1943 is estimated at 761,630, including 255,440 men and 506,190 women, and represents a drop of 35.8 per cent for all students, a decrease of 67.6 per cent for the men and 1.4 per cent for the women. Of the year's grand total, 384,050 were assigned for specialized training by the armed forces.

ESTIMATES OF ENROLLMENT, INSTITUTIONS OF HIGHER EDUCATION, OCT. 15, 1942, AND OCT. 15, 1943
[U.S. Office of Education]

Type of institution, see	Total enrollment 1942 ^a	1943 ^b	Nonmilitary enrollment 1943
All institutions.....	1,209,150	1,120,300	761,630
Men.....	688,350	609,830	255,440
Women.....	520,800	510,470	506,190
Universities, colleges, & professional schools.....	988,570	949,240	623,710
Men.....	600,060	553,970	231,670
Women.....	388,510	395,270	392,040
Teachers colleges.....	104,540	89,780	67,470
Men.....	33,580	29,760	7,770
Women.....	70,960	60,020	59,700
Normal schools.....	8,200	7,410	5,190
Men.....	1,420	2,490	2,270
Women.....	6,780	4,920	4,920
Junior colleges.....	107,840	73,870	65,260
Men.....	53,290	23,610	15,730
Women.....	54,550	50,260	49,530

^a Based on returns from 882 institutions. ^b Based on returns from 843 institutions.

The extensive use of colleges and universities as Army and Naval training centers apparently has been the medium through which the four-year institutions have kept in operation. In 1943 there was no record of the closing of a college, compared with three colleges closed and one merged in 1942. However, in contrast, the junior colleges did not fare so well; according to the American Association of Junior Colleges, 77 such institutions have suspended or closed permanently as a result of the war. Fifty-one of the two-year colleges closed during 1943. Considered in this light the picture appears darker than is actually the case, for many of the junior institutions that suspended were small, marginal colleges and none of the institutions forced to close enrolled a large student body. And, although the regular junior college enrollment showed a decline of 15 per cent, the total number of students in these institutions reached the record number of 326,000. The trend toward decrease

INSTITUTIONS OF HIGHER EDUCATION IN THE UNITED STATES

[Statistics from U.S. Educational Directory, 1943]

Type of institution	Institutions for men	Institutions for women	Coeducational institutions	Total	State control	District or city control	Private control	Denominational control	Protestant	Roman Catholic	Total
College or university.....	91	155	444	690	105	14	181	247	143		690
Professional school.....	92	9	160	261	17 ^a	1	150	69	24		261
Teachers college.....	...	22	170	192	161	5	16	1	9		192
Normal school.....	1	12	7	20	5	2	8	3	2		20
Junior college.....	32	78	323	433	42 ^b	171	86	105	29		433
<i>Negro institutions</i>											
College or university.....	2	2	58	62	17	2	6	36	1		62
Professional school.....	1	...	6	7	1	...	4	2	...		7
Teachers college.....	...	1	14	15	11	3	...	1	...		15
Normal school.....	...	...	...	...	...	...	...	...	...		...
Junior college.....	...	1	21	22	1	3	2	16	...		22
<i>Total:</i>											
White institutions.....	216	276	1,104	1,596	330	193	441	425	207		1,596
Negro institutions.....	3	4	99	106	30	8	12	55	1		106
Grand total.....	219	280	1,203	1,702	360	201	453	480	208		1,702

^a Includes 3 under national control. ^b Includes 1 in Canal Zone under national control.

Institution and Address	Control or Affiliation	Date Founded	Chief Executive	Faculty ^a	Enrollment, 1948-49				Student Aid 1948-49 ^c	Endowment ^d	Gifts and Grants 1948-49	Value of Plant
					Total	Men	Women	Graduate Students ^b				
Alabama												
* Alabama, Univ. of, University.....	State.....	1820	Raymond R. Paty.....	275	4,418	2,907	1,511	81	\$151,941	\$5,100,000	\$584,955	\$8,116,000
Alabama Coll., Montevallo.....	State.....	1896	Arthur Fort Harman.....	71	1,029	3,515	1,029	407	17,492	585,122	317,483	2,421,000
* Alabama Polytechnic Inst., Auburn.....	State.....	1872	L. N. Duncan.....	207	4,616	3,515	1,101	298	2,476	695,710	46,889	4,888,461
Birmingham-Southern Coll., Birmingham.....	Methodist.....	1856	Geo. R. Stuart.....	53	1,000	570	430	465	15,803	580,824	46,730	2,947,000
† Howard Coll., Birmingham.....	Baptist.....	1842	Maj. Harwell G. Davis.....	45	1,001	513	488	380	22,629	736,879	102,860	501,925
Huntingdon Coll., Montgomery.....	Methodist.....	1854	Hubert Searey.....	32	575	.....	575	111	7,500	400,000	60,500	800,000
Judson Coll., Marion.....	Baptist.....	1838	J. I. Riddle.....	24	200	.....	200	200	10,000	519,000	22,000	681,000
† Spring Hill Coll., Spring Hill.....	Catholic.....	1830	W. D. O'Leary.....	36	771	634	137	202	14,000	200,000	7,500	1,000,000
State T. C., Florence.....	State.....	1872	A. O. Keller.....	40	808	183	625	392	2,964	.....	150,000	2,000,000
State T. C., Jacksonville.....	State.....	1883	H. F. Greenhill.....	53	364	54	210	257	7,804	.....	208,727	1,396,209
State T. C., Livingston.....	State.....	1883	N. F. Greenhill.....	26	125	15	110	123	4,815	.....	83,100	719,506
State T. C., Montgomery [N.].....	State.....	1874	H. Connell Tremholm.....	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
State T. C., Troy.....	State.....	1887	C. B. Smith.....	35	197	81	116	3	6,900	.....	90,340	790,500
Talladega Coll., Talladega [N.].....	Private.....	1867	Buell G. Gallagher.....	29	255	114	141	.....	18,000	1,145,108	67,200	1,363,052
† Tuskegee Inst., Tuskegee [N.].....	Private.....	1881	Frederick D. Patterson.....	176	1,280	629	651	715	11,353	7,163,140	135,175	4,720,623
Alaska												
Univ. of Alaska, College.....	Territorial.....	1922	Charles E. Bunnell.....	230	162	120	42	.....	2,500	.....	273,000	1,000,000
Arizona												
Arizona, Univ. of, Tucson.....	State.....	1885	Alfred Atkinson.....	189	4,011	2,010	2,001	85	665	1,193,134	1,101,510	6,261,985
† State T. C., Flagstaff.....	State.....	1899	Thomas J. Torney.....	40	224	103	121	4	247	.....	199,061	1,500,000
State T. C., Tempe.....	State.....	1885	Grady Gammage.....	72	1,345	484	861	205	443	726	.....	2,066,000
Arkansas												
* Arkansas, Univ. of, Fayetteville.....	State.....	1871	Arthur M. Harding.....	210	2,282	1,627	655	112	912	132,660	18,760	4,009,169
Arkansas A. and M. Coll., Monticello.....	State.....	1900	Marvin Bankston.....	40	250	100	150	.....	200	.....	110,000	1,500,000
* Arkansas State Coll., Jonesboro.....	State.....	1910	H. E. Thompson.....	46	1,580	713	840	.....	503	.....	160,000	1,851,115
Henderson State T. C., Arkadelphia.....	State.....	1929	Matt L. Ellis.....	44	749	291	458	.....	283	12,018	2,200	982,650
Hendrix Coll., Conway.....	Methodist.....	1834	John Hugh Reynolds.....	39	373	207	166	.....	30	1,047,904	39,489	864,914
Quachita Coll., Arkadelphia.....	Baptist.....	1856	Jas. R. Grant.....	40	630	332	298	.....	307	575,000	40,000	600,000
State T. C., Conway.....	State.....	1907	Nolan M. Fry.....	41	972	292	680	.....	582	.....	143,089	2,000,000
California												
* California, Univ. of, Berkeley.....	State.....	1868	Robert Gordon Sproul.....	2,376	25,508	13,520	11,988	2,799	4,437	33,378,992	447,680	60,278,797
California Inst. of Technology, Pasadena.....	Private.....	1891	Robert A. Millikan.....	190	1,146	1,146	.....	511	.....	13,000,000	12,000,000	1,000,000
Chapman Coll., Whittier.....	Disc. of Christ.....	1920	George N. Reeves.....	64	176	76	101	.....	27	119,000	2,000	1,000,000
Dominican Coll. of San Rafael, San Rafael.....	Catholic.....	1890	Sister M. Thomas.....	37	1,865	765	1,093	.....	228	.....	419,495	1,772,582
Fresno State Coll., Fresno.....	State.....	1911	Frank W. Thomas.....	35	412	223	189	37	436	19,690	6,024	926,010
George Pepperdine Coll., Los Angeles.....	Private.....	1880	Sister Mary Loyola.....	42	253	.....	253	.....	323	(u)	(u)	(u)
Holy Names Coll. of the Oakland.....	Catholic.....	1916	Sister Mary Eucharistia.....	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
Immaculate Heart Coll., Los Angeles (u).....	Catholic.....	1865	Edward J. Whalen.....	47	580	580	.....	50	13,500	.....	99,500	690,000
Loyola Univ. of Los Angeles, Los Angeles.....	Catholic.....	1909	Walter E. Macpherson.....	340	337	317	20	.....	130,059	2,260,000	314,400	3,082,000
Medical Evang. Coll., Loma Linda & Los Angeles.....	Private.....	1852	Lynn T. White, Jr.....	86	640	.....	488	52	234	.....	39,500	3,370,033
Mount Saint Mary's Coll., Los Angeles.....	Catholic.....	1925	Mother M. de Lourdes.....	32	525	20	520	350	20	.....	34,835	2,350,274
Occidental Coll., Los Angeles.....	Presbyterian.....	1887	Rensen DuBois Bird.....	64	3,583	336	393	414	29	30,314	25,000	1,206,692
† Pacific Coll. of the Stockton.....	Methodist.....	1881	Tully C. Knobs.....	64	757	800	403	95	264	1,543,569	14,344	704,801
† Pacific Union Coll., Angwin.....	Adventist.....	1909	H. J. Klooster.....	41	835	.....	.....	10	107,824	3,899,492	45,498	3,771,919
* Pomona Coll., Claremont.....	Private.....	1887	E. Wilson Lyon.....	67	841	410	431	.....	248	86,150	29,923	2,033,094
Redlands, Univ. of, Redlands.....	Baptist.....	1907	Edman J. Anderson.....	57	754	317	437	51	279	(u)	(u)	(u)
† St. Mary's Coll. of Calif., St. Mary's Coll. (u).....	Catholic.....	1863	Brother Austin.....	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
St. Patrick's Seminary, Menlo Park (u).....	Catholic.....	1897	Joseph V. Nevins.....	83	1,565	825	740	.....	414	.....	1,734,500	3,000,000
San Diego State Coll., San Diego.....	State.....	1885	Walker R. Hepner.....	77	1,586	1,420	166	661	.....	.....	5,000	1,678,672
San Francisco Univ. of San Francisco.....	Catholic.....	1930	Mother Leonor Mejia.....	26	502	501	1,791	25	3,014	.....	170,000	2,500,000
San Francisco Coll. for Women, San Francisco.....	Catholic.....	1899	Alexander C. Roberts.....	77	2,697	1,182	1,455	.....	3,140	.....	24,470	2,008,041
San Francisco State Coll., San Francisco.....	State.....	1862	T. W. MacQuarrie.....	125	543	543	.....	.....	31,069	900,567	24,470	2,008,041
* Santa Clara Univ. of, Santa Clara.....	State.....	1851	Charles J. Walsh.....	59	183	7,359	5,130	1,006	4,915	1,600,000	863,523	10,500,000
* Santa Clara Univ. of, Santa Clara.....	Catholic.....	1926	Mary Kimberly Shirk.....	26	183	7,359	5,130	1,006	4,915	1,600,000	863,523	10,500,000
Scripps Coll., Claremont.....	Private.....	1926	Mary Kimberly Shirk.....	26	183	7,359	5,130	1,006	4,915	1,600,000	863,523	10,500,000
* Southern California, Univ. of, Los Angeles.....	Private.....	1879	R. B. von Klein-Smidt.....	707	12,489	.....	.....	.....	.....	.....	.....	.....

Institution and Address	Control or Affiliation	Date Founded	Chief Executive	Faculty ^a	Enrollment, 1948-49				Student Aid 1948-49 ^c	Endowment ^d	Gifts and Grants 1948-49	Value of Plant
					Total	Men	Women	Graduate Students ^b				
Stanford Univ., Stanford University.....	Private.....	1885	Donald B. Tresidder.....	625	4,651	2,802	1,849	940	\$157,462	\$30,429,837	\$1,051,512	\$19,195,288
Whittier Coll., Whittier.....	Friends.....	1901	H. F. Spencer (e).....	47	474	32	239	11	17,085	675,000	6,655	594,000
Adams State T. C., Alamosa.....	State.....	1921	Ira Richardson.....	25	287	2,567	1,759	150	42,556	469,762	1,689,993	750,000
* Colorado Univ. of Boulder.....	State.....	1876	Robert L. Stearns.....	319	4,326	2,667	1,659	23	33,601	2,560,500	63,626	10,971,821
* Colorado Coll., Colorado Springs.....	Private.....	1874	Charles Brown Hershey.....	58	1,010	369	641	23	39,261	125,000	356,000	2,123,000
* Colorado School of Mines, Golden.....	State.....	1874	McVilvie F. Coolbaugh.....	61	663	663	663	4	19,260	517,790	319,962	4,572,482
* Colorado State Coll. of Mines and M. Arts, Fort Collins.....	State.....	1870	Roy M. Green.....	163	1,707	1,172	535	16	41,638	6,519	3,400,000	2,111,201
* Denver Univ. of Denver.....	State.....	1890	George Willard Frazer.....	80	809	205	604	452	1,097	2,661,012	204,633	1,200,000
* Loretto Heights Coll., Loretto.....	Methodist.....	1864	Caleb F. Gates, Jr.....	352	7,172	3,909	3,263	654	81,404	146,929	.....	1,000,000
Western State Coll., Gunnison.....	Catholic.....	1891	Paul J. Ketrick.....	39	295	189	420	141	2,945	.....	.....	581,355
Albertus Magnus Coll., Gunnison.....	State.....	1911	C. C. Casey.....	32	609	233	376	114	3,800	3,019	270,000	1,500,000
* Connecticut Coll., New Haven.....	Catholic.....	1925	Sister M. Uriel.....	37a	233	114	279	329	17,920	307,300	2,926,000	6,005,971
* Connecticut Univ. of New Britain.....	State.....	1849	H. D. Welte.....	69	393	1,684	835	134	46,300	2,218,000	769,362	4,052,638
Connecticut Coll., Storrs.....	State.....	1881	A. N. Jorgensen.....	217	2,619	747	714	207	13,390	.....	30,713	1,213,000
St. Joseph Coll., West Hartford.....	Private.....	1911	Dorothy Schaffer.....	78	747	.....	.....	.....	.....	.....	.....	.....
State T. C., Danbury.....	Catholic.....	1932	Sister M. Rosa.....	35	714	.....	.....	.....	.....	.....	.....	.....
State T. C., New Haven.....	State.....	1904	Ralph C. Jenkins.....	80a	301	46	255	66	110	.....	.....	100,000
State T. C., Williamstown.....	State.....	1893	E. Ward Ireland (e).....	42	153	32	121	34	28	6,700	149,626	750,000
† Trinity Coll., Hartford.....	State.....	1889	George H. Shafer.....	42	153	32	121	34	28	6,700	149,626	750,000
U. S. Coast Guard Academy, New London.....	Private.....	1823	Remsen B. Ogilby.....	47	467	.....	.....	5	58	38,097	225,575	4,034,100
* Wesleyan Univ., Middletown.....	Federal.....	1876	Rear Admiral James Pine.....	161	1,455	75	75	.....	.....	.....	.....	4,500,000
* Yale Univ., New Haven.....	Private.....	1831	Victor L. Butterfield.....	77	168	165	3	16	57,060	8,068,220	259,563	5,531,762
* Yale Univ., New Haven.....	Private.....	1701	Charles Seymour.....	1,066	3,253	2,756	497	436	953,205	106,153,519	1,197,244	68,700,000
* Delaware Univ. of Newark.....	State.....	1833	Walter Hullen.....	142	1,510	545	262	92	193	708,687	.....	5,553,000
American Univ., The District of Columbia.....	Methodist.....	1891	Paul F. Douglass.....	146	2,721	1,186	1,535	1,017	469	21,750	85,705	3,328,623
Dunbarton Coll. of America.....	Catholic.....	1887	Patrick J. McCormick.....	248	2,155	1,282	873	1,250	2,331	.....	.....	773,602
* Georgetown Coll. of Holy Cross.....	Catholic.....	1935	Sister Mary Frederiek.....	16	190	190	190	77	.....	53,960	.....	4,513,400
* George Washington Univ.....	Private.....	1789	Lawrence C. Gorman.....	627	1,945	1,853	92	103	7,873	258,888	11,942	6,000,000
* Howard Univ., Washington.....	Private.....	1821	Cloyd Heck Marvin.....	412a	11,145	6,130	5,015	1,293	3,221	2,510,000	4,230	7,778,701
James Ornvald Wilson T. C., Washington.....	Private.....	1867	Mordecai Wyatt Johnson.....	265	3,644	1,856	1,779	493	957	1,021,645	.....	345,432
Miner T. C. [N.].....	Municipal.....	1873	Walter E. Hager.....	41	520	93	427	69	.....	.....	177,797	304,689
Trinity Coll., Hartford.....	Municipal.....	1854	Eugene A. Clark.....	48	368	55	313	.....	.....	.....	.....	2,500,000
Washington Missionary Coll., Takoma Park.....	Catholic.....	1897	Sister Catherine Dorothea.....	54	439	.....	429	.....	65	450,000	50,633	588,357
* Florida Univ. of Gainesville.....	Adventist.....	1904	Benj. G. Wilkinson.....	39	467	246	221	123	3,608	40,000	.....	9,238,306
Florida A. and M. Coll. for Negroes, Tallahassee.....	State.....	1853	John J. Tiger.....	180	2,710	2,710	.....	60	205,749	2,082,415	50,000	1,950,000
Florida Southern Coll., Lakeland.....	State.....	1887	J. R. E. Lee St.....	875	875	227	648	1,079	11,987	640,000	60,000	1,600,000
Florida State Coll. for Women, Tallahassee.....	Methodist.....	1885	Ludd M. Snively.....	61	550	65	485	280	8,000	60,000	63,626	4,958,808
* John B. Stetson Univ., Deland.....	State.....	1905	Douglas Campbell.....	190	1,991	1,991	1,991	21	40,864	10,962	27,000	1,700,000
* Miami Univ. of Coral Gables.....	Baptist.....	1883	William Sims Allen.....	60	844	235	609	5	374	900,000	224,205	1,466,400
* Rollins Coll., Winter Park.....	Private.....	1926	B. F. Ashe.....	75	1,775	689	786	90	21,617	905,165	74,744	1,466,400
Agnes Scott Coll., Decatur.....	Private.....	1885	Hamilton Holt.....	44	379	161	218	75	83,963	165,000	12,988	2,186,748
Atlanta Univ., Atlanta [N.] (e).....	Private.....	1899	James Ross McCain.....	61	539	31	336	217	8,650	3,868,341	4,770	2,055,069
Brenau Coll., Gainesville.....	Private.....	1867	R. E. Clement.....	20	217	31	347	76	29,181	567,347	.....	639,918
Clark Coll., Atlanta [N.].....	Private.....	1878	Raymond J. Pearce.....	41	347	153	291	134	1,387	8,200,000	1,225,048	8,229,000
* Emory Univ., Emory University.....	Methodist.....	1820	James P. Brawley.....	31	444	1,952	1,776	113	1,882	945,146	437,295	7,080,689
* Georgia State Coll., Industrial College [N.].....	State.....	1836	Goodrich C. White.....	316a	2,072	2,445	1,776	113	1,882	8,200,000	1,225,048	8,229,000
* Mercer Univ., Macon.....	State.....	1785	Harmon W. Caldwell.....	185	4,221	2,445	1,776	113	1,882	945,146	437,295	7,080,689
* Morehouse Coll., Atlanta [N.] (e).....	Baptist.....	1892	Benj. F. Hubert.....	29	500	325	175	30	6,000	1,400,000	100,000	1,315,000
* Morris Brown Coll., Atlanta [N.] (e).....	Baptist.....	1887	Spright Dowell.....	29	415	415	415	774	12,495	1,180,718	11,080	333,635
* Paine Coll., Augusta [N.].....	Methodist.....	1881	Benjamin E. Mays.....	61	415	415	415	774	12,495	1,180,718	11,080	333,635
* Paine Coll., Augusta [N.].....	Methodist.....	1882	W. A. Fountain, Jr.....	28	605	254	346	106	21,839	102,107	49,352	123,400
* Paine Coll., Augusta [N.].....	Methodist.....	1882	E. C. Peters.....	16	205	51	154	106	6,165	35,000	66,500	425,000

Institution and Address	Control or Affiliation	Date Founded	Chief Executive	Faculty ^a	Enrollment, 1948-49				Student Aid 1948-49 ^c	Endowment ^d	Gifts and Grants 1948-49	Value of Plant
					Total	Men	Women	Graduate students ^b				
Shorler Coll., Rome,.....	Baptist.....	1873	Paul M. Cousins.....	24	217	.....	217	.....	\$ 18,000	\$ 487,000	\$ 36,443	\$ 500,000
Spelman Coll., Atlanta [N.] (g).....	Baptist.....	1881	Florence M. Read.....	23	427	.....	427	.....	18,760	3,119,704	2,758	909,044
Wesleyan Coll., Macon,.....	Methodist.....	1836	Nonen C. McPherson, Jr.,.....	48	406	.....	406	.....	18,000	500,000	40,000	2,500,000
Hawaii, Univ. of, Honolulu,.....	Territorial.....	1907	Gregg M. Sinclair.....	105	1,745f	962	783	233	15,483	35,467	934,770	3,706,401
Idaho, Univ. of, Moscow,.....	State.....	1893	R. H. Snyder.....	28	176	45	131	80	3,600	800,000	.....	800,000
Idaho, Coll. of, Caldwell,.....	State.....	1889	Harrison C. Dale.....	176	2,154	1,425	729	55	4,800	3,104,328	1,310,000	3,000,000
Lewisville State Normal School, Lewistown,.....	Presbyterian.....	1891	William W. Hall, Jr.,.....	28	289	172	117	.....	2,500	521,000	14,000	450,000
Northwest Nazarene Coll., Nampa,.....	State.....	1893	Glen W. Todd.....	31	283	58	225	.....	429,027	21,416	.....	1,000,000
Idaho, Univ. of,.....	Nazarene.....	1913	Dr. L. T. Corlett.....	21	450	207	243	18	28,500	.....	4,573	341,070
Art Inst. of Chicago, School of, Chicago,.....	Private.....	1879	Hubert Ropp.....	90a	710	.....	.....	35	12,000	.....	.....	.....
Augustana Coll. & Theological Sem., Rock Island,.....	Lutheran.....	1860	Conrad J. J. Bergendoff.....	58	1,260	677	583	126	283	1,237,556	95,366	1,694,357
Aurora Coll., Aurora,.....	Advent Chr.....	1893	Theodore P. Stephens.....	14	191	85	106	.....	60	69,491	28,600	251,737
Bradley Polytechnic Inst., Peoria,.....	Private.....	1897	Fredric R. Hamilton.....	61	783	511	272	.....	423	2,384,174	.....	1,300,300
Carthage Coll., Carthage,.....	Lutheran.....	1870	Rudolph G. Schulz, Jr.,.....	21	261	150	111	.....	60	831,221	29,453	502,227
Central Y.M.C.A. Coll., Chicago,.....	Y.M.C.A.....	1919	Edward J. Sparling.....	115a	2,596	1,559	1,037	.....	608	24,000	10,500	.....
Chicago, Univ. of,.....	Private.....	1891	Robert Maynard Hutchins.....	815	18,327	12,481	5,846	4,022	306,381	69,423,073	1,148,550	43,711,214
Chicago T. C., Chicago (u),.....	Municipal.....	1869	John A. Bartky.....	(u)	6,608	2,048	4,558	856	(u)	2,000,000	15,000	2,223,000
De Paul Univ., Chicago,.....	Catholic.....	1898	Michael J. O'Connell.....	244a	615	274	341	.....	405	.....	.....	2,010,325
Eastern Illinois State T. C., Charleston,.....	State.....	1895	Robert G. Buzzard.....	85	615	219	116	.....	19	16,808	66,518	1,101,043
Elmhurst Coll., Elmhurst,.....	Ev. & Ref.....	1871	Timothy Lehmann.....	26	335	219	116	.....	69	2,355	67,868	1,109,160
George Williams Coll., Chicago,.....	Private.....	1890	Harold Coe Coffman.....	25	260	143	117	81	3,873	218,218	285,532	42,531,131
Illinois, Univ. of, Urbana,.....	State.....	1867	A. C. Willard.....	1,895	13,972	9,776	4,196	347	72	1,486,150	13,558	888,047
Illinois Coll., Jacksonville,.....	Presb. & Cong.....	1829	H. Gary Hudson.....	28	322	250	72	.....	21,778	12,097	329,789	627,885
Illinois Inst. of Technology, Chicago,.....	Private.....	1892	Henry Townley Head.....	242a	5,561	3,119	2,442	71	15,894	2,026,533	627,885	1,684,841
Illinois State Normal Univ., Normal,.....	State.....	1857	W. W. Fairchild.....	193	2,246	1,211	1,035	.....	15,894	1,176,549	31,123	975,000
Illinois Wesleyan Univ., Bloomington,.....	Methodist.....	1857	William E. Shaw.....	412	725	373	352	16	10,750	1,019,130	45,000	1,415,544
James Millikin Univ., Decatur,.....	Presbyterian.....	1901	John Charles Hessler.....	9	551	309	242	.....	156	2,639,357	121,568	1,815,184
Knox Coll., Galesburg,.....	Independent.....	1837	Carter Davidson.....	60	548	312	236	.....	90	19,334	9,330	1,700,000
Lake Forest Coll., Lake Forest,.....	Presbyterian.....	1857	Ernest A. Johnson (e).....	28	1,785	249	204	.....	138	1,357,770	22,491	5,463,468
Loyola Univ., Chicago,.....	Catholic.....	1870	Joseph M. Egan.....	775	4,215	2,317	1,898	400	12,115	961,873	23,968	2,017,612
MacMurray Coll. for Women, Jacksonville,.....	Methodist.....	1846	Clarence P. McClelland.....	53	713	.....	577	9	18,762	3,822,007	21,034	1,280,052
Monmouth Coll., Monmouth,.....	Presbyterian.....	1853	James H. Grier.....	47	509	249	260	3	105	1,832,967	3,000	2,701,600
Mundelein Coll., Chicago,.....	Catholic.....	1929	Sister M. Justina.....	58	602	.....	602	.....	348	7,719	18,100	901,025
National Coll. of Education, Evanston,.....	Private.....	1886	Edna Dean Baker.....	70a	723	.....	723	.....	114,100	1,202,900	503,155	1,549,075
North Central Coll., Naperville,.....	Evangelical.....	1861	Karl L. Adams.....	40	853	310	242	.....	1,215	50,500,000	21,650,000	29,000,000
Northern Illinois State T. C., DeKalb,.....	State.....	1895	Edward E. Ball.....	69	853	351	501	.....	6,425	178,000	724,011	3,156,905
Northwestern Univ., Evanston,.....	Private.....	1851	Franklyn B. Snyder.....	975	22,320	12,092	10,318	875	78	16,758	94,747	1,569,905
Principia Coll., Thebes,.....	Private.....	1898	Fredrick E. Morgan.....	92	330h	149	190	.....	125	25,000	190,000	1,000,000
Rockford Coll., Rockford,.....	Private.....	1847	Mary Abby Cheek.....	40	300	20	280	.....	605	24,290	118,100	2,991,950
Rosary Coll., Elgin,.....	Catholic.....	1901	Sister Mary Peter.....	68	564	.....	564	.....	399	17,506	7,006	1,400,097
Saint Francis Coll. of Joliet,.....	Catholic.....	1925	Sister Mary Peter.....	39	569	.....	569	.....	1,232	559,992	.....	2,000,897
St. Francis Xavier Coll. for Women, Chicago,.....	Catholic.....	1912	Sister Mary Peter.....	39	569	.....	569	.....	1,232	559,992	.....	2,000,897
Southern Illinois Normal Univ., Carbondale,.....	State.....	1890	Roscoe Pulliam.....	131	2,413	1,105	1,308	.....	656	700,000	78,000	1,700,000
Western Illinois State T. C., Macomb,.....	State.....	1890	E. C. Ball.....	50	723	301	422	38	25,400	700,000	78,000	1,700,000
Wheaton Coll., Wheaton,.....	Private.....	1853	V. Raymond Edman.....	76	1,323	681	642	.....	656	700,000	78,000	1,700,000
Indiana												
Ball State T. Association, Muncie,.....	State.....	1918	W. E. Wagoner.....	100a	1,702	559	1,193	123	783	466,471	10,000	4,500,503
Butler Univ., Indianapolis,.....	Disc. of Christ.....	1855	M. O. Ransom.....	73	2,093	1,051	1,042	513	953	23,906	2,904,300	3,451,365
DePauw Univ., Greencastle,.....	Methodist.....	1837	Clayton E. Williams.....	90	1,400	666	734	6	231	6,130,903	12,800	3,500,047
Earham Coll., Richmond,.....	Friends.....	1847	William Cullen Dennis.....	36	465	224	241	.....	91	1,387,553	77,318	817,518
Evansville Coll., Evansville,.....	Methodist.....	1855	Lincoln Bell Hale.....	30	378	312	266	.....	218	4,450	483,375	697,115
Franklin Coll., Franklin,.....	Baptist.....	1834	William C. Spencer.....	31	315	161	154	.....	126	10,504	912,214	3,614
Goshen Coll., Goshen,.....	Mennonite.....	1894	Ernest E. Miller.....	28	379	175	204	5	116	130,500	66,385	227,220
Hanover Coll., Hanover,.....	Presbyterian.....	1827	Albert George Parker, Jr.,.....	23	282	136	146	.....	.....	1,680,000	99,000	749,000
Indiana State T. C., Terre Haute (u),.....	State.....	1865	Ralph N. Treay.....	23	282	136	146	.....	.....	1,680,000	99,000	749,000

Institution and Address	Control or Affiliation	Date Founded	Chief Executive	Faculty	Enrollment, 1948-49				Student Aid 1948-49	Endowment d 1948-49	Gifts and Grants 1948-49	Value of Plant
					Total	Men	Women	Graduate students				
*† Indiana Univ., Bloomington.....	State.....	1820	Herman B. Wells.....	412	7,769	4,511	3,258	785	\$377,621	\$2,484,194	\$2,505,000	\$30,067,777
Manchester Coll., North Manchester.....	Presbyterian.....	1889	V. F. Schwalm.....	39	567	253	314	...	36,884	593,090	15,701	629,440
*† Purdue Univ., Lafayette.....	Catholic.....	1849	J. Hugh O'Donnell.....	692	8,650	6,785	1,865	546	50,000	1,560,000	450,000	18,280,000
*† Rose Polytechnic Inst., Terre Haute.....	Private.....	1874	Donald B. Prentiss.....	92	327	327	...	...	9,000	2,000,000	...	569,000
St. Mary-of-the-Woods Coll., St. Mary-of-the-Woods.....	Catholic.....	1840	Mother M. Bernard.....	40	231	...	...	132	27,047	585,700	...	2,351,250
St. Mary's Coll., Notre Dame.....	Catholic.....	1844	Sister M. Madeleine.....	57a	508	...	506	...	2,102	544,433	11,804	1,258,988
Valparaiso Univ., Valparaiso.....	Lutheran.....	1859	Otto Paul Kretzmann.....	47	559	348	211	...	36,773	544,433	40,684	1,258,988
*† Wabash Coll., Crawfordsville.....	Private.....	1832	Frank Hugh Sparks.....	39	343	343	...	...	23,982	2,308,669	56,000	936,378
Iowa												
Central Coll., Pella.....	Reformed.....	1853	Irvin J. Lubbens.....	26	469	299	170	...	12,000	375,000	26,200	505,607
Clarke Coll., Dubuque.....	Catholic.....	1843	Sister Mary Mulholland.....	36	281	...	281	...	17,112	234,848	...	1,850,000
Goe Coll., Cedar Rapids.....	Presbyterian.....	1881	Charles A. Anderson.....	61	700	387	313	...	40,801	1,823,648	15,281	1,312,820
*† Cornell Coll., Mount Vernon.....	Methodist.....	1853	Russell D. Cole (e).....	52	646	298	348	...	54,697	2,385,031	16,450	1,295,586
*† Drake Univ., Des Moines.....	Private.....	1881	Henry Gadd Harmon.....	120a	1,589	843	746	202	888	1,700,235	108,515	1,326,150
*† Duquesne Univ. of Duquesne.....	Presbyterian.....	1852	Dr. Dale D. Welch.....	30a	669	204	214	43	208	717,436	37,410	1,708,370
*† Grinnell Coll., Grinnell.....	Congregational.....	1846	Samuel N. Stevens.....	57	511	234	277	...	28,221	2,227,300	76,800	1,178,000
*† Iowa State Univ. of Iowa City.....	State.....	1847	Virgil M. Hancher.....	633	9,706	4,981	4,725	2,109	34,494	1,007,315	3,670,136	22,426,567
*† Iowa State Coll., Ames.....	State.....	1858	Charles E. Friley.....	700	7,621	4,985	2,636	673	35,000	1,500,000	4,150,000	16,000,000
*† Iowa State T. C., Cedar Falls.....	State.....	1876	Malcolm Price.....	133	1,517	478	1,039	...	198,806	3,260	670,400	4,298,789
*† Iowa Wesleyan Coll., Mount Pleasant.....	Methodist.....	1839	Stanley B. Niles.....	36	338	132	206	...	19,000	700,000	19,817	799,244
Loras Coll., Dubuque (u).....	Catholic.....	1839	M. J. Martin.....	37	435	...	...	(u)	(u)	(u)	(u)	(u)
Luther Coll., Decorah.....	Lutheran.....	1861	O. J. H. Preus.....	97	435	234	201	...	21,000	470,000	380,000	1,038,400
Morningside Coll., Sioux City.....	Methodist.....	1889	Earl A. Rodman.....	42	642	334	308	...	9,106	820,000	61,600	723,000
Parsons Coll., Fairfield.....	Presbyterian.....	1875	Herbert Carleton Mayer.....	28	920	334	586	...	10,778	628,340	171,991	572,704
*† St. Ambrose Coll., Davenport i.....	Catholic.....	1882	Amberse J. Burke.....	70	1,211	747	464	...	384	740,000	150,000	1,019,323
Simpson Coll., Indianola.....	Methodist.....	1867	Edwin E. Voigt.....	33	682	220	462	...	16,322	1,379,276	47,822	574,871
Kansas												
Baker Univ., Baldwin.....	Methodist.....	1858	Nelson Pearson Horn.....	33	384	172	162	...	21,100	1,387,682	16,250	692,542
Bethany Coll., Lindsborg.....	Lutheran.....	1881	Emory K. Lindquist.....	32	262	96	166	...	11,452	396,710	17,955	537,135
*† Fort Hays Kansas State Coll., Hays.....	State.....	1901	Lynard D. Wright Wooster.....	80	1,615	557	1,058	33	842	2,358,379	254,750	1,338,000
*† Kansas Univ. of Lawrence.....	State.....	1865	M. E. W. Malott.....	240	4,410	2,696	1,714	362	1,429	286,000	1,983,820	6,000,000
*† Kansas State Coll., Manhattan.....	State.....	1893	M. E. W. Malott.....	538	3,861	2,419	1,442	263	1,178	505,000	30,000	525,000
*† McPherson Coll., McPherson.....	Brethren.....	1887	W. W. Peters.....	25a	308	147	166	...	103	325,000	...	1,097,817
*† Marymont Coll., Salina.....	Catholic.....	1922	Mother Mary Chrysostom.....	32	408	...	403	...	210	92,019	...	1,189,000
*† Mount St. Schastica Coll., Atchison.....	Catholic.....	1924	Mother Lucy Dooley.....	35	678	...	678	...	360	443,932	25,779	723,678
Ottawa Univ., Ottawa.....	Baptist.....	1865	Andrew B. Martin.....	26	266	133	133	...	11,951	92,000	...	2,000,000
St. Benedict's Coll., Atchison.....	Catholic.....	1898	Cuthbert McDonald.....	36	270	270	...	...	336	627,606	116,900	616,061
St. Mary's Coll., Xavier.....	Catholic.....	1932	Arthur M. Murphy.....	41	765	...	765	...	16,143	627,606	1,914,189	2,793,287
Southwestern Coll., Winfield.....	Methodist.....	1885	Chas. E. Schofield.....	38	455	254	191	...	804	122,346	468,806	1,307,459
State T. C., Emporia.....	State.....	1863	James F. Price.....	104	2,202	1,083	1,119	62	24,896	1,151,868	153,893	1,307,459
State T. C., Pittsburg.....	State.....	1903	Rees H. Hughes.....	126	1,805	782	1,023	121	31	95,856	723,405	1,388,345
Washington Municipal Univ., Topeka.....	Municipal.....	1865	Bryan Sewall Stoffer.....	65a	972	532	440	...	5,081	1,027,626	177,602	2,956,951
Wichita Municipal Univ. of Wichita.....	Municipal.....	1926	W. M. Jardine.....	65	1,276	787	489	4	666	568,555	52,109	1,058,000
Kentucky												
Abury Coll., Wilmore.....	Private.....	1890	Z. T. Johnson.....	22	523	238	285	...	85	10,500,358	91,400	5,207,887
*† Berea Coll., Berea.....	Private.....	1855	Francis S. Hutchins.....	78a	941	395	546	...	358	1,833,266	10,398	1,019,391
*† Centre Coll. of Kentucky, Danville.....	Presbyterian.....	1819	Jas. H. Hewlett (e).....	21	377	225	152	...	110	265,000	3,145,072	92,807
*† Eastern Kentucky State T. C., Richmond.....	State.....	1906	W. F. O'Donnell.....	72	1,137	365	772	6	269	600,000	92,807	6,059,293
*† Georgetown Coll., Georgetown.....	Baptist.....	1829	S. S. Hill.....	20	237	69	78	...	100	184,075	155,688	1,026,183
*† Kentucky Univ. of Lexington.....	State.....	1865	Herman Lee Donovan.....	349	4,168	2,161	2,007	685	2,061	1,027,626	177,602	2,956,951
*† Kentucky State Coll., Frankfort [N.].....	State.....	1886	R. B. Alwood.....	33	393	116	277	...	113	53,478	35,914	184,092
*† Louisville Univ. of Louisville.....	Municipal.....	1837	E. W. Jacobsen.....	133	5,006	3,108	1,898	146	...	...	4,570	368,000
*† Louisville Municipal Coll., Louisville.....	Municipal.....	1931	E. W. Jacobsen.....	12	276	41	235	...	39	...	234,000	2,624,392
Nazareth Coll., Louisville.....	Catholic.....	1920	Sister Mary A. Coady.....	49	955	...	955	43	443	...	254,000	2,500,000
State T. C., Morehead.....	State.....	1923	Wm H. Vaughan.....	62	668	211	457	...	28	...	27,183	777,412
State T. C., Murray.....	State.....	1923	Wm H. Richmond.....	65	798	405	391	13	322	686,988	...	...
*† Transylvania Coll., Lexington.....	Disciples.....	1780	L. A. Brown (e).....	22	361	180	181	...	144	...	...	...

Institution and Address	Control or Affiliation	Date Founded	Chief Executive	Faculty ^a	Enrollment, 1948-49				Student Aid 1948-49 ^c	Endowment ^d	Gifts and Grants 1948-49	Value of Plant
					Total	Men	Women	Graduates ^b				
Wellesley Coll., Wellesley.....	Private.....	1870	Mildred H. McAfee.....	183a	1,511	.....	1,511	45	\$137,897	\$10,876,729	\$150,835	\$11,274,715
Wheaton College, Norton.....	Private.....	1834	J. Edgar Park.....	70	465	.....	465	.....	30,020	1,189,471	3,811	2,748,310
† Williams Coll., Williamstown.....	Private.....	1793	James Phinney Baxter, III.....	96	834	834	.....	3	111,510	11,450,582	243,239	6,008,604
† Worcester Polytechnic Inst., Worcester.....	Private.....	1865	Wat Tyler Cliverius.....	69	631	631	.....	9	41,329	4,702,758	.....	2,993,944
Michigan												
Albion Coll., Albion.....	Methodist.....	1835	John Lawrence Seaton.....	52	771	411	360	8	12,250	1,940,750	44,440	1,787,082
† Alma Coll., Alma.....	Presbyterian.....	1886	Iroy W. Hamilton.....	30	330	191	139	.....	15,073	126,828	38,529	666,942
Calvin Coll., Grand Rapids.....	Chr. Ref. Ch.....	1876	Henry Schultze.....	31	577	301	276	.....	8,560	215,000	125,000	563,000
† Central Michigan Coll. of Ed., Mount Pleasant.....	State.....	1872	C. L. Anspach.....	112	1,960	682	1,278	64	7,784	.....	85,000	2,257,500
Detroit Univ. of Detroit.....	Catholic.....	1872	Charles H. Cloud.....	204a	3,093	2,269	764	105	6,163	1,640,000	140,293	10,983,000
Emmanuel Missionary Coll., Berrien Springs.....	Adventist.....	1877	A. W. Johnson.....	36	439	187	252	.....	1,178	300,000	65,203	671,422
Hillsdale Coll., Hillsdale.....	Private.....	1844	Harvey L. Turner.....	28	369	162	207	.....	42	760,610	219,204	720,947
Hope Coll., Holland.....	Reformed.....	1836	Wayne W. Fisher.....	33	529	327	202	.....	92	850,000	25,000	1,250,000
* Kalamazoo Coll., Kalamazoo.....	Baptist.....	1835	Paul Lamont Thompson.....	30	437	239	198	4	32,790	1,300,066	17,250	1,222,800
† Marygrove Coll., Detroit.....	Catholic.....	1910	Sister M. Honora.....	72	653	.....	653	.....	10,100	118,050	31,499	3,877,591
* Michigan Coll. of Min. & Tech., Houghton.....	State.....	1870	Alexander Grant Ruthven.....	821	15,205	8,644	6,561	4,462	2,694	16,122,339	10,657,100	60,959,913
* Michigan St. Coll. of Agric. & Appl. Sci., East Lansing.....	State.....	1885	Grover C. Dillman.....	80	835	782	53	.....	142	10,756	519,000	2,270,441
Michigan State Normal Coll., Ypsilanti.....	State.....	1855	John Alfred Hamnah.....	506	6,724	4,294	2,430	207	818	80,320	4,713,203	16,376,128
Nazareth Coll., Nazareth.....	State.....	1849	J. M. Munson.....	172	1,377	475	902	6	933	1,886,145	70,000	6,899,704
Northern Michigan Coll. of Education, Marquette.....	Catholic.....	1897	Sister M. Kevin.....	39	265	.....	265	.....	270	.....	.....	.....
St. Ignace Coll., Adrian.....	Catholic.....	1839	Henry A. Pope.....	61	395	133	262	.....	267	.....	242,716	809,670
Siena Heights Coll., Adrian.....	Catholic.....	1919	Mother Mary Gerald.....	24	.....	.....	225	.....	578	.....	.....	.....
* Wayne Univ., Detroit.....	Municipal.....	1868	Warren E. Bow.....	688a	20,110	9,789	10,321	1,282	8,160	65,226	178,700j	3,501,868j
† Western Michigan Univ., Kalamazoo.....	State.....	1904	Paul V. Sangren.....	215	2,157	787	1,370	162	1,103	8,550	742,613	3,315,235
Missouri												
* Carleton Coll., Northfield.....	Private.....	1866	Donald J. Cowling.....	78	939	466	473	6	103,926	3,459,275	74,772	4,080,943
† Concordia Coll., Moberly.....	Lutheran.....	1891	J. N. Brown.....	49	502	229	273	.....	21,242	562,341	22,435	718,921
† Gustavus Adolphus Coll., St. Peter.....	Lutheran.....	1882	Walter A. Lundén.....	39a	494	275	219	.....	17,358	662,300	27,500	879,084
† Hamline Univ. St. Paul.....	Methodist.....	1854	Charles Nelson Pace.....	47	668	324	343	1	16,261	2,005,301	71,774	980,573
* Macalester Coll., St. Paul.....	Presbyterian.....	1885	C. E. Ficken (e).....	63	713	357	356	.....	120	18,847	2,350,000	49,102
* Minnesota Coll., Minneapolis.....	State.....	1851	Walter C. Coffey.....	1,740j	41,988	24,342	17,646	1,449	7,272	332,336j	13,276,443j	42,681,884j
† Saint Bonaventure Coll. of Saint Joseph.....	Catholic.....	1913	Mother R. Pratschner.....	36	191	.....	191	.....	167	14,820	10,800	522,702
† St. Catherine Coll., St. Paul.....	Catholic.....	1911	Sister Antonius.....	55	959	.....	959	.....	260	75,036	607,574	94,153
† St. Mary Coll., Winona.....	Catholic.....	1873	Brother L. Jerome.....	33	333	333	.....	.....	74	3,400	1,260,000	1,260,000
† St. Olaf Coll., Northfield.....	Lutheran.....	1874	C. M. Graskow.....	81a	1,080	507	573	.....	60	41,916	81,446	2,187,861
† St. Scholastica Coll. of Duluth.....	Catholic.....	1912	Mother Athanasius.....	41a	432	.....	432	.....	165	6,476	108,854	2,136,186
† St. Teresa Coll. of St. Paul.....	Catholic.....	1910	Sister Mary A. Molloy.....	40	54	.....	454	.....	387	2,138	.....	.....
† St. Thomas Coll. of St. Paul.....	Catholic.....	1910	James H. Moynihan.....	36	751	751	.....	.....	46	23,250	300,238	2,222,296
State T. C., Bemidji.....	State.....	1919	Charles R. Satgast.....	41	576	177	399	.....	267	6,000	146,850	1,150,000
State T. C., Duluth.....	State.....	1895	Herbert Sorenson.....	49	727	160	567	.....	354	10,693	171,200	725,000
State T. C., Mankato.....	State.....	1868	Frank D. McElroy.....	57	1,051	239	812	.....	5,000	.....	277,375	3,500,000
State T. C., Moorhead.....	State.....	1887	Otto W. Snarr.....	57	457	113	344	.....	64	.....	.....	1,125,000
State T. C., St. Cloud.....	State.....	1869	Geo. A. Selke.....	69	665	204	461	.....	248	.....	.....	1,000,000
State T. C., Winona.....	State.....	1858	A. T. French.....	44	391	126	265	.....	7,914	.....	167,000	1,231,640
Mississippi												
Alcorn A. & M. Coll., Alcorn.....	State.....	1871	Wm. H. Bell.....	62	346	135	211	.....	15,000	209,871	500	645,529
Blue Mountain Coll., Blue Mountain.....	Baptist.....	1873	Lawrence T. Lowrey.....	26	428	1	427	.....	114	3,400	108,000	536,000
Delta State T. C., Cleveland.....	State.....	1924	William Marion Kethley.....	36	570	111	459	.....	259	10,000	80,000	1,400,000
† Millsaps Coll., Jackson.....	Methodist.....	1892	Marion L. Smith.....	(u)	(u)	(u)	(u)	.....	(u)	.....	.....	.....
* Mississippi Univ. of University.....	State.....	1844	Alfred Hume.....	100	1,188	748	440	12	13,000	.....	3,000	4,600,000
† Mississippi Coll., Clinton.....	Baptist.....	1826	Douglas McGinnis Nelson.....	30	424	278	146	.....	3,200	651,000	.....	680,000
* Mississippi Southern Coll., Hattiesburg.....	State.....	1910	J. B. George.....	57	667	192	475	920	17,903	118,000	118,000	2,800,000
* Mississippi State Coll., State College.....	State.....	1878	George Duke Humphrey.....	143	1,958f	1,674	284	46	67,572	239,789	194,37	6,000,000
Mississippi State Coll. for Women, Columbus.....	State.....	1884	Burney L. Parkinson.....	90	1,204f	1,674	524	.....	1437	67,572	167,949	3,000,000
Tougaloo Coll., Tougaloo [N.].....	Congregational.....	1869	Judson L. Cross.....	21	140	42	104	.....	53	1,104,965	54,735	539,618
Missouri												
† Central Coll., Fayette.....	Methodist.....	1854	Harry S. DeVore.....	40	585	340	245	.....	211	1,265,400	300,000	1,626,358
† Central Missouri State T. C., Warrensburg.....	State.....	1870	G. W. Diemer.....	86	1,587	682	905	.....	1,143	.....	20,000	2,000,000

Institution and Address	Control or Affiliation	Date Founded	Chief Executive	Faculty ^a	Enrollment, 1948-49				Student Aid 1948-49 ^c	Endowment ^d	Gifts and Grants 1948-49	Value of Plant
					Total	Men	Women	Graduate Students ^b				
Culver-Stockton Coll., Canton.....	Disc. of Christ.	1853	Walker H. McDonald.....	22	284	153	131	....	\$ 14,200	\$ 945,870	\$ 20,350	\$ 518,027
† Drury Coll., Springfield.....	Private.....	1873	James F. Findlay.....	36	455	220	235	....	15,442	1,021,843	.....	887,029
* Fontbonne Coll., St. Louis.....	Catholic.....	1917	Sister Mary B. O'Neill.....	43	372	.....	372	....	9,650	.....	.....	877,821
* Kansas City Univ. of Kansas City.....	Private.....	1929	Clarence R. Decker.....	60	1,827	940	887	21	3,000	1,000	150,000	2,500,000
* Kansas City T. C., Kansas City.....	Municipal.....	1911	J. C. Bond.....	29	745	251	494	....	331	.....	72,000	520,000
Lincoln Univ., Jefferson City [N.].....	State.....	1866	Sherman D. Scruggs.....	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
Lindenwood Coll., St. Charles.....	Presbyterian.....	1827	H. M. Gage.....	47	452	.....	452	660	30,000	2,278,740	.....	1,804,838
* Maryville Coll., St. Louis.....	Catholic.....	1872	Mother Marie O. Mouton.....	26	187	.....	187	44	12,200	.....	.....	1,188,000
* Missouri Univ. of Columbia.....	State.....	1839	Frederick A. Middlebush.....	427	6,138	4,091	2,047	861	287,000	2,002,054	20,639	11,691,819
* Missouri Valley Coll., Marshall.....	Presbyterian.....	1867	Thomas W. Bibb.....	19	291	172	119	....	5,291	569,024	1,762	873,485
† Northeast Missouri State T. C., Kirksville.....	State.....	1867	Walton H. Bayle.....	70	2,147	400	1,133	....	7,785	.....	.....	1,179,000
† Park Coll., Parkville.....	State.....	1896	Uol W. Lankin.....	60	1,200	400	800	....	700	1,369,390	70,474	2,000,000
* Rockhurst Coll., Kansas City.....	Presbyterian.....	1875	William Lindsay Young.....	40	440	202	247	....	69	1,526,980	88,000	1,250,000
* St. Louis Univ., St. Louis.....	Catholic.....	1818	Wm. H. McCabe.....	27	310	310	.....	75	10,208	7,554,548	22,614	6,628,525
† Southeast Missouri State T. C., Cape Girardeau.....	Catholic.....	1873	Patrick J. Holoran.....	771	7,672	3,450	4,222	1,258	2,654	280,500	341,500	2,000,000
† Southwest Missouri State T. C., Springfield.....	State.....	1895	Walter Winfield Parker.....	62	1,537	325	1,212	....	632	659,093	128,329	14,416,891
* Tarkio Coll., Tarkio.....	State.....	1863	Roy Collins.....	83	129	534	695	....	4,800	.....	.....	2,000,000
* Washington Univ., St. Louis.....	Presbyterian.....	1853	M. Barle Collins.....	23	214	117	97	37	8,000	659,093	15,361	456,113
† Webster Coll., Webster Groves.....	Private.....	1863	George Reeves Throop.....	687a	6,078f	3,045	2,433	210	2,031	18,387,441	728,329	14,416,891
† Westminster Coll., Fulton.....	Catholic.....	1915	George F. Donovan.....	37	497	.....	497	....	227	.....	.....	11,271
† William Jewell Coll., Liberty.....	Presbyterian.....	1853	Franc L. McCluer.....	24	380	375	5	....	187	685,000	11,271	614,428
Montana	Baptist.....	1849	Walter Pope Binns.....	27	440	297	143	....	115	1,205,856	146,997	1,185,095
Billings Polytechnic Inst., Polytechnic.....	Independent.....	1908	Ernest T. Eaton.....	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
† Carroll Coll., Helena.....	Catholic.....	1910	Ernest T. Eaton.....	21	460	395	65	....	300	50,000	.....	1,000,000
† Great Falls Coll. of Edue., Great Falls.....	Catholic.....	1832	J. J. Donovan.....	30	420	116	....	....	300	900,000	.....	1,426,600
† Montana School of Mines, Butte.....	State.....	1895	Francis A. Thomson.....	22	215	195	20	3	5,970	1,114,951	1,088,850	2,054,000
* Montana State Coll., Bozeman.....	State.....	1893	W. M. Cobleigh (e).....	128a	1,703f	862	694	44	103	8,492	93,500	862,634
Montana State Normal Coll., Dillon.....	State.....	1893	Sheldon E. Davis.....	36a	206	66	140	....	93	.....	481,315	3,780,000
Montana State Univ., Missoula.....	State.....	1893	C. W. Lesphart.....	82	1,540	781	768	202	453	.....	.....	.....
* Creighton Univ., Omaha.....	Catholic.....	1878	Joseph P. Zuercher.....	286	1,818	1,199	619	87	216	1,046,525	13,175	468,281
† Doane Coll., Crete.....	Congregational.....	1872	Bryant Drake.....	36	237	132	105	....	13,900	44,200	2,500	1,072,882
Duchesne Coll., Omaha.....	Catholic.....	1881	Mother Helen Casey.....	18	126	.....	126	....	10,806	698,490	28,200	489,391
Hastings Coll., Hastings.....	Presbyterian.....	1882	Wm. Marshall French.....	41	662	268	394	....	4,985	1,554,900	4,500,000	12,048,125
* Nebraska Univ. of Lincoln.....	State.....	1869	C. S. Boucher.....	440	7,426	4,283	3,143	763	1,988	967,952	14,865	639,018
Nebraska Wesleyan Univ., Lincoln.....	Methodist.....	1887	Benjamin F. Schwartz.....	44	486	215	271	....	10,738	86,158	3,750	2,609,583
Omaha Municipal Univ. of Omaha.....	Municipal.....	1909	Rowland Haynes.....	43	2,238	913	1,325	32	672	190,000	120,000	2,000,000
State T. C., Chadron.....	State.....	1911	Wiley G. Brooks.....	41	486	111	375	....	22,820	1,410,000	.....	1,500,000
State T. C., Kearney.....	State.....	1905	Herbert L. Cushing.....	50	1,129	436	693	14	551	170,557	.....	1,500,000
State T. C., Peru.....	State.....	1867	W. R. Pate.....	52	367	183	184	....	8,032	.....	.....	1,500,000
† State T. C., Wayne.....	State.....	1910	J. T. Anderson.....	55	1,320	363	957	2	682	.....	99,869	436,003
† State T. C., Lincoln.....	State.....	1891	E. E. Cossentine.....	38	582	248	230	....	1,382	.....	.....	.....
Union Coll., Lincoln.....	Adventist.....	1874	Leon W. Hartman.....	81	856	526	330	32	157	508,831	466,445	3,153,607
* Nevada, Univ. of Reno.....	State.....	1874	Ernest Martin Hopkins.....	241	2,071f	2,071f	.....	57	678	180,000	475,000	7,700,000
† Dartmouth Coll., Hanover.....	Private.....	1769	Lloyd P. Young.....	47	301	60	241	....	3,564	20,000,000	84,000	1,000,000
Keene T. C., Keene.....	State.....	1866	Fred Engelhardt.....	200	1,964	1,239	725	64	586	1,275,108	1,006,942	7,000,000
* New Hampshire Univ. of Durham.....	State.....	1870	Bernard L. Silver.....	30	312	59	253	....	151	.....	60,000	500,000
Plymouth T. C., Plymouth.....	State.....	1893	Bertrand Dolan.....	28	200	200	.....	....	10,000	.....	.....	1,000,000
St. Anselm's Coll., Manchester.....	Catholic.....	1867	Arlo Ayres Brown.....	47	444	419	25	252	90,736	6,227,000	278,797	2,631,000
† Drew Univ., Madison.....	Methodist.....	1908	Mother Mary John.....	20	150	.....	150	....	8,775	.....	.....	816,488
Georgian Court Coll., Lakewood.....	Catholic.....	1933	George H. Black.....	22	757	531	226	....	170	154,949	170,981	1,206,600
Newark Coll. of Eng., Newark.....	Private.....	1816	Allan R. Guilmore.....	74	2,495	2,405	6	166	385,000	36,000,000	2,900,000	20,167,663
* Princeton Univ., Princeton.....	State.....	1746	Harold Willis Deddie.....	354	4,469	2,352	7,321	381	659	5,077,343	2,043,294	20,167,663
* Rutgers Univ., New Brunswick (i).....	State.....	1766	Robert C. Clothier.....	421	4,469	2,352	7,321	381	659	5,077,343	2,043,294	20,167,663

Institution and Address	Control or Affiliation	Date Founded	Chief Executive	Enrollment, 1942-43				Student Aid, 1942-43*		Endowment ^d	Gifts and Grants, 1942-43	Value of Plant
				Total	Men	Women	Graduate Students ^b	Summa-ry ^b				
Saint Elizabeth, Coll. of, Convent Station...	Catholic...	1899	Sister Marie José Byrne...	893	...	893	...	\$ 19,275	\$			\$3,100,000
St. Peter's Coll., Jersey City...	Catholic...	1878	Dennis J. Conney...	1,615	418	893	...	1,625	...		...	800,000
Ston Hall Coll., South Orange...	Catholic...	1856	James F. Kelley...	419	871	814	70	20,000	...		...	1,600,000
State T. C., Glassboro...	State...	1922	Edgar F. Bunce...	300	30	270	...	15,000	...		...	1,250,000
State T. C., Montclair...	State...	1929	Chris C. Rossey...	440	30	410	...	13,000	...		...	1,424,750
State T. C., Newark...	State...	1908	H. A. Sprague...	562	64	498	363	17,000	...		...	1,800,000
State T. C., Paterson...	State...	1913	Ray L. Shaffer...	455	15	360	515	6,400	...		...	897,000
State T. C., Trenton...	State...	1855	C. B. Wightman...	243	64	179	...	25,110	...		...	3,000,000
Stevens Inst. of Technology, Hoboken...	Private...	1855	Roscoe L. West...	71	143	576	...	39,510	...		...	2,500,000
Upsala Coll., East Orange...	Lutheran...	1870	Harvey Nathaniel Davis...	796	706	...	...	14,000	...		...	750,000
New Mexico				516	...	...	...	...	...		...
New Mexico, Univ. of, Albuquerque...	State...	1889	James F. Zimmerman...	2,088	910	1,178	93	2,900	...	373,870	6,500	1,968,663
New Mexico Coll. of A. & M. Arts, Las Vegas...	State...	1889	J. W. Branson...	648	423	225	...	3,697	...	416,418	...	1,597,551
New Mexico Highlands Univ., Las Vegas...	State...	1893	Edward Eyring...	236	60	176	...	16,426	...	...	381,500	1,025,000
State T. C., Silver City...	State...	1893	Haddon W. James...	334	114	220	...	6,092	...	...	852	605,004
New York												
Adelphi Coll., Garden City...	Private...	1896	Paul Dawson Eddy...	540	...	540	2	15,468	...	48,150	4,277	2,309,124
* Alfred Univ., Alfred...	Private m...	1836	J. Nelson Norwood...	506	317	189	11	122	...	1,171,234e	34,478	1,500,000
* Brooklyn Polytechnic Inst. of, Brooklyn...	Private...	1854	Harry Stanley Rogers...	3,883	3,883	...	723	916	...	1,687,069	1,785	1,976,151
* Brooklyn Coll., Brooklyn...	Municipal...	1930	Harry D. Gidensee...	10,945	4,457	6,538	146	2,016	...	2,029,541	2,037,128	7,066,599
* Buffalo, Univ. of, Buffalo...	Private...	1846	Samuel P. Capen...	4,400	2,300	3,210	62	1,218	...	6,147,008	...	7,066,599
* Canisius Coll., Buffalo...	Catholic...	1870	Timothy J. Coughlin...	1,184	859	325	73	311	...	...	...	1,263,824
* City Coll., Coll. of the City of New York, New York...	Municipal...	1848	Harry Noble Wright...	902a	20,192	15,655	940	5,615	...	...	531,847	8,665,954
* Clarkson Coll. of Technology, Potsdam...	Private...	1896	John A. Ross, Jr.	644	644	...	...	...	...	1,298,152	13,991	753,966
* Colgate Univ., Hamilton...	Private...	1819	Everett N. Case...	1,800	1,800	...	...	55,000	...	5,800,200	13,675	4,027,000
* Columbia Univ., New York...	Private...	1754	Nicholas Murray Butler...	22,920	8,884	14,036	5,509	434,605	...	14,703,406	59,803,844	59,803,844
* Cornell Univ., Ithaca...	Private...	1865	Edmund E. Day...	6,850	4,880	1,861	596	1,731	...	33,110,464	1,139,865	29,375,357
* D'Youville Coll., Buffalo...	Catholic...	1908	Sister Grace...	310	...	310	80	...	...	...	...	1,680,330
* Elmira Coll., Elmira...	Private...	1855	William S. A. Pot...	263	...	263	...	22,481	...	876,240	12,898	9,000,000
* Fordham Univ., New York...	Catholic...	1841	Robert J. Gannon...	213	477	3,030	1,413	98,000	...	722,000	80,300	1,000,000
* Good Counsel Coll., White Plains...	Catholic...	1923	Mother M. Aloysia...	24	178	...	...	9,120	...	48,000	9,481	1,000,000
* Hamilton Coll., Clinton...	Private...	1812	William Harold Cowley...	415	415	...	...	3,913,883	...	21,095	2,868,832	2,868,832
* Hobart Coll., Geneva...	Episcopal...	1822	John Milton Potter...	50	492p	...	...	24,050p	...	1,405,192p	111,910p	1,510,612p
* Hofstra Coll., Hempstead...	Private...	1935	Howard S. Brower...	45a	779	444	335	101	...	740,000	1,100	943,000
* Houghton Coll., Houghton...	Private...	1833	S. W. Paine...	32	392	177	236	215	...	274,920	30,200	302,690
* Hunter Coll. of the City of New York, New York...	Methodist...	1870	George N. Shuster...	380	13,371	561	12,826	13,830	...	2,044,331	48,200	15,230,000
* Keuka Coll., Keuka Park...	Municipal...	1890	Henry E. Allen...	20	973	273	...	8,500	...	346,847	14,852	979,728
* Manhattan Coll., New York...	Baptist...	1853	Brother A. Victor...	1,350	...	1,350	250	200	...	3,000,000	11,985	2,745,750
* Manhattanville Coll. of the Sacred Heart, New York...	Catholic...	1847	Grace C. Dammann...	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
* Marymount Coll., Tarrytown...	Catholic...	1907	Mother M. Gerard...	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)	(u)
* Mount Saint Vincent Coll. of, New York...	Catholic...	1910	Sister C. Marie...	48	428	...	...	33,558	...	240,571	11,750	2,653,884
* Nazareth Coll. of Rochester, Rochester...	Catholic...	1924	Mother Rose Mifflin...	35	280	...	...	25,000	...	41,794	9,063	3,011,186
* New Rochelle Coll. of, New Rochelle...	Catholic...	1904	Francis W. Walsh...	63	786	...	...	45,000	...	446,665	2,000,000	2,000,000
* New York State Coll. for Teachers, Albany...	State...	1844	John Manhattan Skyles...	98	897f	...	...	339	...	524,602	524,602	15,310,148
* New York Univ., New York...	Private...	1831	Henry Woodburn Chase...	2,006	33,174	19,156	5,005	9,533	...	8,739,220	...	2,300,000
* Niagara Univ., Niagara...	Catholic...	1856	Joseph M. Noonan...	99	1,247	1,052	195	114	...	...	...	1,957,000
* Queens Coll., Flushing...	Catholic...	1837	Paul Klappner...	157a	2,925	918	...	777	...	...	886,233	1,957,000
* Rensselaer Polytechnic Inst., Troy...	Private...	1824	Alvan Valentine...	169	1,497	1,489	32	116	...	9,967,989	397,385	7,213,000
* Rochester Univ. of Rochester...	Private...	1850	Thomas W. Houston...	309	3,125	1,690	216	1,080	...	52,780,467	32,043,307	32,043,307
* Russell Sage Coll., Troy...	Private...	1916	Thomas McKinniss...	73	642	...	...	26,525	...	1,027,117	1,441	1,314,803
* Saint Bonaventure Coll., Saint Bonaventure...	Catholic...	1859	Thomas Plasmann...	62	409	384	57	320	...	18,000	18,000	1,327,000
* St. Joseph's Coll. for Women, Brooklyn...	Private...	1916	W. Dillon Dean...	25	392	...	...	4,500	...	36,821	36,821	846,000
* St. Lawrence Univ., Canton...	Private...	1856	Millard H. Jencks...	59	636f	302	2	194	...	17,984	15,676	2,800,447
* Saint Lawrence Coll. of, Albany...	Catholic...	1920	Edmund F. Gibbons...	30	292	302	...	3,500	...	81,609	14,700	2,936,593
* Sarah Lawrence Coll., Bronxville...	Private...	1928	Constance Warren...	55a	292	...	...	32,585	...	512,488	49,489	1,936,784
* Skidmore Coll., Saratoga Springs...	Private...	1911	Henry T. Moore...	78	836	...	...	37,925	...	840,346	15,049	2,666,994
* State I. C., Buffalo...	State...	1872	Harry W. Rockwell...	78	1,008	215	259	288	...	354,185	4,575	2,100,000

Institution and Address	Control or Affiliation	Date Founded	Chief Executive	Faculty ^a	Enrollment, 1948-49				Student Aid 1948-49 ^c	Endowment ^d	Gifts and Grants 1948-49	Value of Plant
					Total	Men	Women	Graduate Students ^b				
State T. C., Fredonia.....	State.....	1867	Leslie R. Gregory.....	49	425	115	310	...	\$ 9,000	\$	\$198,328	\$ 450,000
State T. C., Geneseo.....	State.....	1868	James B. Welles.....	51	527	37	490	...	16,481	1,400,000	...	1,400,000
State T. C., New Falm.....	State.....	1866	Benjamin H. Matteson (e).....	47	348	9	339	6	158	...	...	985,000
State T. C., Oneonta.....	State.....	1889	Charles W. Hunt.....	40	357	22	335	...	171	...	...	727,740
State T. C., Oswego.....	State.....	1861	Ralph W. Swetman.....	42	443	229	214	...	142	...	...	1,237,000
State T. C., Potsdam.....	State.....	1866	Clarence O. Lehman.....	46	475	62	413	...	251	...	...	1,030,000
* Syracuse Univ., Syracuse.....	Private.....	1870	William Pearson Tolley.....	678	8,786	4,312	4,474	686	2,467	4,558,750	350,000	10,203,505
† Union Coll., Schenectady.....	Private.....	1795	Dixon Ryan Fox.....	75	778	778	...	1	87	3,868,474	67,005	3,612,450
† United States Military Academy, West Point.....	Federal.....	1802	Maj. Gen. F. B. Wilby.....	354	2,423	2,423	...	...	...	5,981,000	75,000,000	75,000,000
Vassar Coll., Poughkeepsie.....	Private.....	1861	Henry Noble MacCracken.....	188	1,265	...	1,265	15	155	10,806,291	72,725	10,190,561
Wagner Memorial Lutheran Coll., Staten Island.....	Lutheran.....	1863	Clarence C. Stoughton.....	25	333	199	233	...	13,255	332,943	16,047	1,191,601
Wells Coll., Aurora.....	Private.....	1868	W. E. Weld.....	45	253	...	253	...	30,000	1,568,252	13,960	2,104,370
William Smith Coll., Geneva.....	Private.....	1908	John Milton Potter.....	50	492p	...	192	...	24,060p	1,405,192p	111,918p	1,510,612p
North Carolina												
Appalachian State T. C., Boone.....	State.....	1903	B. B. Daugherty.....	47	875	269	606	...	451	533,855	154,000	2,250,000
Bennett Coll., Greensboro [N.].....	Methodist.....	1873	David D. Jones.....	33	408	...	408	...	55	332,911	35,601	1,392,688
† Catawba Coll., Salisbury.....	Evangelical.....	1852	Alvin Robert Keppel.....	32	380	179	201	...	95	392,911	121,675	982,310
Davidson Coll., Davidson.....	Presbyterian.....	1857	J. R. Cunningham.....	40	699	695	...	...	191	3,000,000	230,160	2,104,000
*† Duke Univ., Durham.....	Private.....	1838	R. L. Flowers.....	(u)	1,064	129	935	39	(u)	...	182,897	3,100,000
East Carolina T. C., Greenville.....	State.....	1907	Leon R. Meadows.....	73	372	...	372	...	11,168	619,040	81,230	738,548
Greensboro Coll., Greensboro.....	Methodist.....	1838	Luther L. Gobbel.....	37a	300	143	157	...	66	967,215	19,208	538,742
Guilford Coll., Guilford College.....	Friends.....	1834	Clyde A. Milner.....	21	428	243	184	17	245	1,300,000	6,000	1,138,461
Johnson C. Smith Univ., Charlotte [N.].....	Presbyterian.....	1867	H. L. McCreey.....	34	484	177	307	...	150	671,381	42,489	848,905
Lenoir Rhyne Coll., Hickory.....	Evangel. Luth.....	1881	P. E. Monroe.....	18	231	56	175	...	76	45,100	16,441	42,425,420
Livingstone Coll., Salisbury [N.].....	A. M. E. Zion.....	1892	W. J. Trent.....	40	461	...	461	...	92	16,472	161,000	210,000
Meredith Coll., Raleigh.....	Baptist.....	1891	Carlyle Campbell.....	37	807	696	364	30	450	389,936	4,012,206	1,600,000
* North Carolina, A. & T. Coll., Greensboro.....	State.....	1891	Ferdinand D. Bluford.....	92	1,060	7,278	1,329	393	2,554	3,045,178	185,000	6,478,000
*† North Carolina, Univ. of Chapel Hill.....	State.....	1789	Frank P. Graham.....	376	8,604	292	492	62	348	...	...	...
* N. C. St. Coll. A. & E. of Univ. N. C., Raleigh [N.].....	State.....	1889	J. E. Shepard.....	211	2,555	2,514	41	55	499	...	...	...
Queens Coll., Charlotte.....	Presbyterian.....	1857	Hunter B. Blakely.....	41	357	...	357	...	...	334,866	32,000	711,000
St. Augustine's Coll., Raleigh [N.].....	Episcopal.....	1807	Edgar H. Gould.....	16	201	85	116	...	...	467,971	5,612	1,212,542
Salem Coll., Winston-Salem.....	Moravian.....	1772	Howard E. Rondthaler.....	45	328	...	328	...	332	358,000	43,676	675,000
Shaw Univ., Raleigh [N.].....	Baptist.....	1865	Robert P. Daniel.....	32	977	170	807	5	14,620	...	...	...
State T. C., Elizabeth City [N.].....	State.....	1891	Harold L. Trigg.....	23	448	37	411	...	211	3,000,000	80,000	1,565,000
Wate Forest Coll., Wake Forest.....	Baptist.....	1834	Thurman Kitchen.....	60	1,301	1,053	248	10	594	...	82,979	1,666,822
Western Carolina T. C., Cullowhee.....	State.....	1889	H. T. Hunter.....	40	582	77	505	...	253	...	50,048	1,110,660
Winston-Salem T. C., Winston-Salem.....	State.....	1892	Francis L. Atkins.....	42	582	...	582	...	7,419	401,163	15,251	7,500,000
Woman's Coll. of Univ. N. C., Greensboro.....	State.....	1892	Walter Clinton Jackson.....	219	2,252	...	2,252	17	844	...	...	...
North Dakota												
Janestown Coll., Jamestown.....	Presbyterian.....	1883	Barnd H. Kroeze.....	40	481	281	200	...	39,000	1,086,190	38,000	931,287
* North Dakota, Univ. of Grand Forks.....	State.....	1883	John C. West.....	135	1,931	1,179	752	34	16,604	1,700,000	488,363	3,100,000
* North Dakota Agricultural Coll., Fargo.....	State.....	1889	Frank Lissenden Eversull.....	126	1,542	1,063	479	39	7,462	1,786,688	2,255,676	585,000
† State T. C., Dickinson.....	State.....	1918	Charles E. Scott.....	30	734	274	460	...	409	...	103,813	660,000
State T. C., Mayville.....	State.....	1889	Byrl W. Grace.....	23	350	58	292	...	150	30,000	101,703	684,661
State T. C., Minot.....	State.....	1889	C. C. Swain.....	54	894	158	736	...	308	186,505	119,032	1,010,000
† State T. C., Valley City.....	State.....	1889	Eugene H. Klempell.....	50	327	106	221	...	3,090	470,000	...	...
Ohio												
* Akron, Univ. of Akron.....	Municipal.....	1870	Hezaleton E. Simmons.....	129	4,370	1,997	1,569	33	1,261	143,160	239,895	1,597,950
* Andover Coll., Yellow Springs.....	Private.....	1853	Algo D. Henderson.....	102a	816	442	474	...	274	1,735,128	278,423	1,628,503
Ashtand Coll., Ashtand.....	Brethren.....	1878	Edward Glenn Mason.....	26	348	125	223	...	100	400,000	16,000	585,000
† Baldwin-Wallace Coll., Berea.....	Methodist.....	1845	Louis C. Wright.....	57	641	302	339	43	186	1,942,703	75,314	1,977,115
† Bowling Green State Univ., Bowling Green.....	State.....	1910	Frank J. Prouit.....	96	1,682	757	925	2	420	33,752	...	3,704,344
Capital Univ., Columbus.....	Lutheran.....	1850	Ohio Mess.....	75	687	325	362	...	243	621,264	17,874	1,231,500
Case School of Applied Science, Cleveland.....	Private.....	1880	William Elgin Wickenden.....	104	1,718	1,678	40	92	36,104	4,475,800	255,928	3,170,190
† Cincinnati, Univ. of Cincinnati.....	Municipal.....	1819	Raymond Walters.....	...	9,801	5,885	8,916	356	1,017	10,029,054	855,862	10,835,829
* Dayton, Univ. of Dayton.....	Catholic.....	1850	John A. Elbert.....	67	1,020	1,092	528	28	1,337	116,748	2,406,051	2,406,051
† Denison Univ., Granville.....	Baptist.....	1831	Kenneth I. Brown.....	77	1,171	626	545	...	...	3,198,639	112,205	3,513,632

Institution and Address	Control or Affiliation	Date Founded	Chief Executive	Faculty ^a	Enrollment, 1942-43				Student Aid 1942-43 ^c	Endowment ^d	Gifts and Grants 1942-43	Value of Plant
					Total	Men	Women	Graduate Students ^b				
Fenn Coll., Cleveland.....	Private.....	1881	C. V. Thomas.....	70	2,992	2,236	756	...	\$ 9,336	\$ 809,060	\$ 65,531	\$1,373,498
Findlay Coll., Findlay.....	Church of God.....	1882	Homere R. Dunathan.....	21	269	177	92	...	507,333	473,093	26,905	530,359
*Hildeberg Coll., Tiffin.....	Evang. & Ref.....	1850	Clarence E. Josephson.....	21	269	177	92	...	507,333	473,093	26,905	530,359
Hiram Coll., Hiram.....	Private.....	1850	Paul H. Fall.....	23	285	157	128	...	23,842	1,069,364	21,956	985,357
John Carroll Univ., Kent.....	Catholic.....	1836	Thomas J. Donnelly.....	47	767	601	166	...	4,924	2,500,000	730,438	2,500,000
Kent State Univ., Kent.....	State.....	1910	Raymond M. Clark.....	92	1,710	757	953	...	11,680	700,000	41,402	2,183,331
Kenyon Coll., Gambier.....	Episcopal.....	1824	Gordon Keith Chalmers.....	45	411	411	...	...	47,680	1,657,222	17,015	1,303,613
Lake Erie Coll., Painesville.....	Private.....	1856	Helen Dalton Bragdon.....	28	150	...	150	...	13,708	793,115	14,028	1,090,813
*Marietta Coll., Marietta.....	Private.....	1797	Draper T. Schoonover.....	31	277	158	119	...	7,637	1,297,273	...	...
Mary Manse Coll., Toledo.....	Catholic.....	1873	Sister M. C. Raynor.....	(u)	(u)	(u)	(u)	...	(u)	(u)	(u)	(u)
Mt. St. Joseph-on-the-Ohio, Coll., Mt. St. Joseph.....	State.....	1869	Alfred H. Upham.....	(u)	(u)	(u)	(u)	...	(u)	(u)	(u)	(u)
Mount Union Coll., Alliance.....	Methodist.....	1920	Mother Mary Regina.....	30	283	362	283	...	4,500	750,000	80,000	1,615,000
Muskingum Coll., New Concord.....	Methodist.....	1846	Charles Burgess Ketchum.....	40	608	246	246	...	26,000	1,500,000	22,946	1,859,500
Notre Dame Coll., South Euclid.....	Presbyterian.....	1837	Robert N. Montgomery.....	64	662	288	374	...	16,467	913,132	...	...
†Oberlin Coll., Oberlin.....	Catholic.....	1922	Mother Mary Vera.....	40	207	...	207	...	174	20,117,339	110,936	5,834,739
*Ohio State Univ., Columbus.....	Private.....	1833	Ernest H. Wilkins.....	202	1,781	815	966	...	1,075	163,766	334,069	28,469,758
*Ohio State Univ., Athens.....	State.....	1873	Howard L. Bevis.....	894	14,137	9,201	4,936	...	7,026	85,814	307,388	5,500,000
†Ohio Wesleyan Univ., Delaware.....	Methodist.....	1804	W. S. Gamersfelder.....	243	3,460	1,779	1,681	...	1,358	3,071,000	14,313	875,368
†Otterbein Coll., Westerville.....	Methodist.....	1842	Herbert J. Burgstahler.....	89	1,469	687	762	...	50,462	1,205,830	...	...
St. Mary of the Springs Coll., Columbus.....	Un. Presbren.....	1847	J. Ruskin Howe.....	36	533	264	269	...	43	17,083	102,949	200,000
Sisters Coll. of Cleveland, Cleveland.....	Catholic.....	1911	Sister M. Aloysie.....	(u)	(u)	(u)	(u)	...	(u)	(u)	(u)	(u)
Toledo, Univ. of, Toledo.....	Catholic.....	1928	Joseph Schrems.....	20	159	159	...	...	618	25,000	248,000	3,953,000
†Trusline Coll. for Women, Cleveland.....	Municipal.....	1872	Philip C. Nash.....	156	3,343	1,932	1,411	...	59	25,000	...	...
*Western Coll., Oxford.....	Catholic.....	1871	Mother Marie Sands.....	31	180	...	180	...	42	1,268	14,019	1,315,202
Wilberforce Univ., Cleveland.....	Private.....	1853	Mrs. Alexander Thomson.....	35	250	...	250	...	1,780	771,459	557,535	1,140,203
Wilmington Coll., Wilmington.....	State.....	1826	Winifred G. Leutner.....	652a	8,914	3,135	5,761	...	2,211	13,372,239	13,433	21,400,276
Wittenberg Coll., Springfield.....	Friends.....	1856	Charles H. Wesley.....	89	1,296	704	592	...	125	70,458	15,000	2,332,750
†Wooster Coll., Wooster.....	Un. Presbren.....	1846	Sheppard Arthur Watson.....	21a	989	446	543	...	298	819,997	33,000	2,600,000
Xavier Univ., Cincinnati.....	Catholic.....	1866	Rees Edgar Tulloss.....	52	989	479	510	...	185	2,162,640	33,000	2,600,000
Central State Coll., Edmond.....	State.....	1891	Charles Frederick Wishart.....	75	1,035	387	452	...	37,150	3,480,000	5,577	1,458,424
†East Central State Coll., Ada.....	State.....	1909	Celestin J. Steiner.....	69a	1,487	973	514	...	334	145,424	...	...
†Northwestern State Coll., Tahlequah.....	State.....	1909	R. R. Robinson.....	54	1,293	304	989	...	582	113,190	135,848	1,358,428
*Oklahoma A. & M. Coll., Stillwater.....	State.....	1897	A. Linscheid.....	64	1,181	482	699	...	876	156,590	157,313	1,458,424
Oklahoma Coll. for Women, Chickasha.....	State.....	1891	John S. Vaughan.....	50	1,201	476	725	...	741	157,313	...	...
Phillips Univ., Enid.....	State.....	1891	Sabin C. Percutt.....	44	778	581	197	...	696	106,952	...	...
Southeastern State Coll., Durant.....	State.....	1907	Joseph A. Brandt.....	296	5,842	3,454	2,388	...	1,875	3,840,328	...	...
Southwestern Inst. of Technology, Weatherford.....	State.....	1901	Henry Garland Bennet.....	60	756	...	756	...	(u)	(u)	(u)	(u)
Tulsa, Univ. of, Tulsa.....	Presbyterian.....	1894	C. Dan Procter.....	60	756	...	756	...	10,000	1,500,000	200,000	1,500,000
Linfield Coll., McMinnville.....	Baptist.....	1857	Eugene S. Briggs.....	42	723	381	342	...	81	684,976	55,000	936,451
Mount Angel Coll., St. Benedict.....	Catholic.....	1930	T. T. Montgomery.....	48	776	293	553	...	697	11,078	...	...
*Oregon Univ. of Eugene.....	State.....	1887	G. S. Sanders.....	35	1,313	279	1,034	...	700	1,204,430	21,304	1,458,424
Oregon State Coll., Corvallis.....	State.....	1876	Harry L. Dillin.....	38	324	147	177	...	21,197	923,934	...	...
Pacific Univ., Forest Grove.....	State.....	1868	Sister Miriam Anna.....	25	102	...	163	...	40	50,000	...	...
Portland, Univ. of.....	Congregational.....	1849	Thomas Meier.....	234a	3,582	1,977	1,612	...	665	80,000	228,752	7,173,452
Reed Coll., Portland.....	Catholic.....	1901	D. M. Erb.....	348	4,369	2,697	1,665	...	1,961	1,134,081	79,981	9,342,208
†Willamette Univ., Salem.....	Private.....	1811	August Leroy Strand.....	26	430	140	121	...	2	261,429	21,000	500,000
Albright Coll., Reading.....	Evangelical.....	1856	W. C. Giersbach.....	60	625	400	221	...	41	25,000	4,250	547,400
†Allegheny Coll., Meadville.....	Private.....	1815	Charles C. Miltner.....	20	306	353	253	...	13	1,627,349	17,775	1,213,185
Bryn Mawr Coll., Bryn Mawr.....	Private.....	1880	Arthur F. Scott.....	31	606	307	321	...	95	1,740,000	175,000	900,000
†Bucknell Univ., Lewisburg.....	Baptist.....	1846	G. Herbert Smith.....	43	628	307	321	...	10	641,447	12,141	1,434,963
			Harry V. Masters.....	31	501	350	243	...	91	1,568,417	91,382	2,398,466
			John Richie Schultz.....	50	839	431	652	...	297	7,196,029	231,646	5,164,633
			Katherine E. McBride.....	82	653	6	652	...	133	(u)	(u)	(u)
			Arnold C. Marts.....	(u)	(u)	(u)	(u)	...	(u)	(u)	(u)	(u)

Institution and Address	Control or Affiliation	Date Founded	Chief Executive	Faculty ^a	Enrollment, 1948-49				Student Aid 1948-49 ^c	Endowment ^d	Gifts and Grants 1948-49	Value of Plant	
					Total	Men	Women	Graduate Students ^b					
* Carnegie Inst. of Technology, Pittsburgh.	Private.	1900	Robert E. Doherty.	400	2,550	1,737	813	60	\$136,290	\$16,868,386	\$214,872	\$8,179,875	
† Chestnut Hill Coll., Philadelphia.	Catholic.	1871	Sister Maria Koska.	35	294	.....	294	.....	155	600,000	2,900	1,745,000
† Dickinson Coll., Dallas.	Catholic.	1923	Sister Mary Borromeo.	46	238	.....	238	.....	155	1,100,000	85,226	1,099,500
† Drexel Inst. of Technology, Philadelphia.	Methodist.	1773	Frederic Pierce Corson.	55	491	357	134	.....	70	1,528,542	.....	1,712,677
* Duquesne Univ., Pittsburgh.	Private.	1891	George P. Rea.	119	2,407	1,701	706	85	13,500	2,014,346	5,000	1,901,163	
† Franklin and Marshall Coll., Lancaster.	Catholic.	1878	R. V. Kirk.	151	1,954	918	1,036	79	20,000	2,000,000	25,322	2,162,000	
† Geneva Coll., Beaver Falls.	Evang. & Ref.	1787	Theodore A. Distler.	46	702	702	.....	.....	55,255	1,305,985	39,772	1,050,139
† Gettysburg Coll., Gettysburg.	Presbyterian.	1848	M. M. Pearce.	31	587	281	306	.....	9,912	740,800	29,000	1,700,000
† Grove City Coll., Grove City.	Lutheran.	1832	Henry W. A. Hanson.	45	702	522	180	.....	18	834,000	3,457	3,121,539
* Haverford Coll., Haverford.	Presbyterian.	1876	Weir C. Ketter.	54	868	435	433	.....	26,728	4,339,276	40,729	4,440,000
† Immaculate Coll., Immaculata.	Friends.	1833	Felix Morley.	75	147	147	.....	.....	19,772	2,701,761	13,044	4,147,130
† Juniata Coll., Huntingdon.	Catholic.	1920	Francis J. Furey.	38	260	.....	260	.....	22,955	2,701,761	13,044	865,000
* Lafayette Coll., Easton.	Brethren.	1876	Charles C. Ellis.	38	377	196	180	.....	150	637,261	56,832	4,646,000
† La Salle Coll., Philadelphia.	Presbyterian.	1826	William Mathew Lewis.	94	914	914	.....	6	258	44,029,000	7,000	2,047,787
† Lebanon Valley Coll., Annville.	Catholic.	1863	Brother Emilian.	33	376	376	.....	.....	17,753	926,107	15,222	7,186,459
* Lehigh Univ., Bethlehem.	Un. Brethren.	1866	Clyde A. Lynch.	37	565	273	292	.....	27,753	8,000,000	178,000	7,186,155
† Lincoln Univ., Lincoln University [N.]	Private.	1866	C. C. Williams.	180	1,940	1,922	18	110	926	111,000	1,044,634	45,974	800,000
† Lincoln Univ., Lincoln University [N.]	Presbyterian.	1854	Walter Livingston Wright	27	311	374	.....	340	16,300	600,000	.....	3,000,000
† Marywood Coll., Scranton.	Catholic.	1915	Mother M. Marcella.	60	450	.....	450	.....	.....	.....	.....	.....
† Mercyhurst Coll., Erie.	Catholic.	1926	Sister M. de Sales Preston.	20	181	.....	181	.....	.....	.....	.....	.....
† Moravian Coll., Theol. Sem., Bethlehem.	Moravian.	1807	F. P. Stoeker (a).	32	215	.....	215	.....	17,000	495,492	43,303	553,583
† Mount Mercy Coll., Pittsburgh.	Catholic.	1929	Mother M. I. Dougherty.	32	215	.....	215	.....	64,500	1,000,618	81,147	2,320,000
† Muhlenberg Coll., Allentown.	Lutheran.	1848	Levering Tyson.	47	455	.....	455	.....	27,953	22,913,365	947,613	30,086,016
† Pennsylvania Univ. of Philadelphia, Pa.	Private.	1740	Thomas S. Gates.	133	9,603	8,550	1,053	1,301	24	601,386	17,845	1,433,880	
† Pennsylvania State Coll., State College.	State.	1869	Herbert L. Spencer.	37	340	340	.....	.....	9,846	517,000	413,331	16,071,141
* Pittsburgh Univ. of Pittsburgh.	State.	1855	John G. Bormann.	639	7,951	5,751	2,200	460	2,655	3,169,557	1,003,921	18,834,444	
† Rosemont Coll., Rosemont.	Private.	1922	Mother Mary Cleophas.	179	11,951	6,911	5,040	2,958	416,000	3,169,557	1,003,921	18,834,444	
† St. Francis Coll., Loretto.	Catholic.	1847	John P. J. Sullivan.	46a	268	.....	268	.....	15,500	500,000	.....	1,200,000
† St. Joseph's Coll., Philadelphia.	Catholic.	1851	Thomas J. Love.	92	430	.....	430	.....	19,020	2,561,492	14,150	1,117,328
† St. Vincent Coll., Latrobe.	Catholic.	1846	Alfred Koch.	32	370	370	.....	105	13,000	2,561,492	1,850	1,749,908
† Seton Hill Coll., Greensburg.	Catholic.	1888	William Coleman Neville.	42	431	431	.....	.....	37,000	1,500,000	250,000	2,000,000
† State T. C., Bloomsburg.	Catholic.	1892	James A. W. Reeves.	52	662	.....	662	.....	22,000	500,000	17,628	2,445,000
† State T. C., California.	State.	1839	Harvey A. Andrews.	40	600	.....	600	.....	250	.....	360,133	2,000,000
† State T. C., Clarion.	State.	1852	Robert M. Steele.	34	657	215	442	15	8,600	.....	86,000	1,308,480
† State T. C., East Stroudsburg.	State.	1907	Paul G. Chandler.	94	920	76	144	.....	8,597	.....	139,500	1,934,713
† State T. C., Edinboro.	State.	1893	Joseph F. Noonan.	37	593	234	359	2	207	9,917	.....	.....
† State T. C., Indiana.	State.	1875	J. M. Van Houten.	34	567	109	458	.....	5,229	.....	.....	.....
† State T. C., Kutztown.	State.	1871	J. M. Usher.	110	1,205	273	932	.....	594	.....	239,556	3,115,000
† State T. C., Lock Haven.	State.	1869	Quincy A. W. Rohrbach.	36	393	132	261	.....	9,000	.....	299,556	2,074,784
† State T. C., Millersville.	State.	1878	Richard T. Parsons.	28	341	170	171	.....	10,000	.....	153,300	1,242,000
† State T. C., Shippensburg.	State.	1859	Willis E. Pratt.	65	339	96	292	.....	1,600	.....	153,300	2,205,342
† State T. C., Slippery Rock.	State.	1855	D. L. Biemstedter.	35	339	116	223	.....	3,033	.....	131,300	2,500,000
† State T. C., West Chester.	State.	1871	Albert Lindsay Rowland.	37	293	107	186	.....	352	235,320	.....	.....
† Susquehanna Univ., Selinsgrove.	Lutheran.	1889	John A. Entz.	59	358	102	256	.....	303	.....	.....	2,413,936
† Swarthmore Coll., Swarthmore.	Friends.	1871	Charles S. Swope.	70	738	53	705	.....	504	.....	.....	822,700
† Temple Univ., Philadelphia.	Private.	1863	G. Morris Smith.	82	203	122	81	.....	33	434,749	17,851	4,406,040
† Thiel Coll., Greenville.	Private.	1804	John W. Nason.	33	734	373	411	.....	87,852	8,026,474	51,166	6,923,600
† Ursinus Coll., Collegeville.	Lutheran.	1846	Robert L. Johnson.	645	4,969	3,944	834	.....	205,300	187,719	465,618	560,000
† Villa Maria Coll., Erie.	Evang. & Ref.	1866	Wm. F. Zimmerman.	24	221	114	107	.....	6,000	186,000	60,000	1,500,000
† Villanova Coll., Villanova.	Catholic.	1869	N. E. McCure.	44	535	275	260	.....	61,000	700,000	24,000	1,119,065
* Washington and Jefferson Coll., Washington.	Catholic.	1832	Sister Stella.	23	179	.....	179	.....	1,000,000	1,000,000	3,934	1,119,065
† Westminster Coll., New Wilmington.	Presbyterian.	1842	Edward V. Stanford.	43a	2,102	1,441	661	111	48,638	3,031,410	69,486	1,801,946	
† Wilkeson Coll., Chambersburg.	United Presb.	1852	Ralph Cooper Hutchison.	49	489	489	.....	.....	23,777	1,615,210	1,599,335	1,169,783
† Brown Univ., Providence r.	Private.	1764	Henry Merritt Wriston.	262	2,183	1,349	563	221	38,777	861,956	8,865	7,592,248	

Institution and Address	Control or Affiliation	Date Founded	Chief Executive	Faculty ^a	Enrollment, 1948-49				Student Aid 1948-49 ^c	Endowment ^d	Gifts and Grants 1948-49	Value of Plant
					Total	Men	Women	Graduate Students ^b				
* Providence Coll., Providence.....	Catholic.....	1919	John J. Dillon.....	70	727	727	.....	377	\$ 2,500	\$ 80,000	\$ 24,000	\$2,500,000
* Rhode Island State Coll., Kingston.....	State.....	1892	Carl R. Woodward.....	137a	1,097	790	307	29	30,100	.....	761,600	5,075,000
Benedict Coll., Columbia [N.].....	Baptist.....	1870	J. J. Sparks.....	24	852	233	619	.....	6,090	3,978	25,327	489,050
* Charleston Coll. of Charleston.....	Municipal.....	1770	Gen. C. P. Summerall.....	18	331	148	183	.....	5,000	464,500	155,000	5,000,000
* The Citadel, The Military Coll. of S. C., Charleston State.....	State.....	1842	Gen. C. P. Summerall.....	105	1,980	1,980	.....	.....	19,407	786,756	365,000	6,118,737
*† Clemson Agric. Coll. of S. C., Clemson.....	State.....	1889	Robert Franklin Poole.....	142	2,532	2,438	94	.....	14,500	2,500,000	6,000	700,000
* Coker Coll., Hartsville.....	Baptist.....	1894	C. Sylvester Green.....	32	256	.....	256	.....	4,125	521,203	6,984	532,632
Converse Coll., Columbia.....	Methodist.....	1854	J. Caldwell Guilds.....	30	338	.....	338	.....	18,754	630,051	22,512	1,181,005
Converse Coll., Spartanburg.....	Private.....	1889	E. M. Gwathmey.....	46	540	116	424	1	70	823,393	10,824	2,176,702
Erskine Coll., Due West.....	Presbyterian.....	1829	Robert Calvin Grier.....	35	238	602	114	4	21,863	507,363	8,235	734,113
* Furman Univ., Greenville.....	Baptist.....	1826	John Laney Plyler.....	60	1,462	602	860	8	15,938	330,000	28,894	369,000
*† Limestone Coll., Gaffney.....	Private.....	1856	Robert Colley Granberry.....	31a	338	131	207	.....	78	15,058	8,246	2,176,702
*† Newberry Coll., Newberry.....	Lutheran.....	1845	James C. Kinard.....	27	303	.....	303	.....	440	6,788	.....	1,460,000
*† South Carolina State Univ. of Columbia.....	State.....	1801	J. R. McKissick.....	106	1,780	1,046	734	43	12,067	250,000	110,400	1,194,000
* South Carolina State Coll. of A. & M. Coll., Orangeburg.....	State.....	1896	M. F. Whitaker.....	80	1,177	496	681	.....	12,067	250,000	110,400	1,194,000
Winthrop Coll., S. C. Coll. for Women, Rock Hill.....	State.....	1886	Dr. Shelton Phelps.....	91	2,012	1,996	16	.....	18,385	626,771	13,902	744,675
Wofford Coll., Spartanburg.....	Methodist.....	1851	Walter Kirkland Greene.....	26	404	404	.....	5	8,196	.....	.....	.....
South Dakota												
* Augustana Coll., Sioux Falls.....	Lutheran.....	1860	Lawrence M. Slaivig.....	37	595	342	253	.....	100	21,490	23,050	404,651
*† Black Hills T. C., Spearfish.....	State.....	1885	Russell E. Jones.....	20	476	.....	476	.....	322	6,126	66,750	543,050
* Dakota Wesleyan Univ., Mitchell.....	Methodist.....	1885	Joseph H. Edgar.....	20	862	167	695	.....	114	6,325	865,128	11,773
Huron Coll., Huron.....	Presbyterian.....	1903	Georgia F. McDougall.....	20	107	84	23	.....	.....	.....	.....	.....
* Northern State T. C., Aberdeen.....	State.....	1882	I. D. Wells.....	45	800	740	574	140	4,555	25,132	115,250	1,000,000
* South Dakota, Univ. of Vermillion.....	State.....	1885	Joseph F. Connolly.....	38	1,314	718	596	16	12,067	250,000	110,400	1,194,000
* South Dakota State Coll. of A. & M. Arts, Brookings State.....	State.....	1881	Lyman E. Jackson.....	135	1,651	1,081	570	9	44,196	551,087	250,760	3,315,578
* Yankton Coll., Yankton.....	Private.....	1881	William C. Lang (e).....	35	239	137	102	.....	2,775	701,517	35,895	663,137
Tennessee												
* Carson-Newman Coll., Jefferson City.....	Baptist.....	1851	James T. Warren.....	30	421	175	246	.....	121	580,353	64,917	533,429
* Chattanooga, Univ. of Chattanooga.....	Methodist.....	1886	David A. Lockmiller.....	48	974	451	523	.....	225	792,630	35,085	1,500,000
* Fisk Univ., Nashville [N.].....	Private.....	1869	Thomas E. Jones.....	42	561	159	402	.....	132	174	12,080	54,312
* George Peabody Coll. for Teachers, Nashville.....	Private.....	1875	S. C. Garrison.....	87	1,207	324	883	301	1,492	3,156,004	67,000	3,800,000
* Knoxville Coll., Knoxville [N.].....	Presbyterian.....	1875	William Lloyd Imes.....	20	227	95	132	.....	59	15,000	600,000	600,000
* Lane Coll., Jackson [N.].....	Col. M. E.	1882	J. F. Lane.....	25	563	105	458	.....	103	5,800	16,100	525,000
* Le Moyne Coll., Memphis [N.].....	Congregational.....	1871	Hollis F. Price.....	31	333	123	210	.....	76	25,127	868,491	1,100,514
* Lincoln Memorial Univ., Harrogate.....	Private.....	1897	S. W. McClelland.....	31	257	101	156	.....	104	77,393	28,693	874,131
* Maryville Coll., Maryville.....	Presbyterian.....	1819	Richard Waldo Lloyd.....	55	666f	267	399	.....	227	1,857,248	110,000	1,500,000
* Memphis State Coll., Memphis.....	State.....	1912	Rich C. Jones.....	39	771	374	397	.....	240	6,000	125,000	1,250,000
* Middle Tennessee State Coll., Murfreesboro.....	State.....	1909	Q. M. Smith.....	55	687	248	439	.....	240	378,898	75,413	993,207
* Searratt Coll. for Christian Workers, Nashville.....	Methodist.....	1924	Hugh C. Stuntz.....	17	138	8	130	78	16,560	471,355	67,759	1,505,279
* Southern Univ. of the Sewanee.....	Presbyterian.....	1857	Alexander Guerry.....	(u)	31	260	201	(u)	165	22,915	115,000	1,300,000
* State T. C., Johnson City.....	State.....	1911	Chas. E. Diehl.....	31	461f	.....	.....	.....	285	12,500	64,100	12,392,000
* Tennessee A. & I. State Coll., Nashville [N.].....	State.....	1794	James D. Hoskins.....	277	3,360	2,095	1,265	217	1,933	503,700	143,000	3,000,000
* Tennessee Polytechnic Inst., Cookeville.....	State.....	1912	W. J. Hale.....	44	1,513	442	1,071	6	543	4,922	110,000	1,075,000
* Tusculum Coll., Greeneville.....	Presbyterian.....	1915	Everett Derryberry.....	51	645	369	276	.....	188	10,785	9,869	513,813
* Vanderbilt Univ., Nashville.....	Private.....	1794	John McSwain.....	20	294	123	171	.....	54	951,169	177,716	7,861,507
* Vanderbilt University, Nashville, Texas	.....	.....	Oliver C. Carmichael.....	434	1,952	1,405	547	96	111,862	27,949,342	25,698	3,852,282
* Baylor Univ., Waco.....	Baptist.....	1845	Pat. M. Neff.....	102	2,004	1,024	980	65	154,235	1,757,666	13,854	413,095
* Bishop Coll., Marshall.....	Baptist.....	1881	Joseph J. Rhoads.....	27	434	101	333	.....	201	3,947	475,536	1,604,985
* East Texas State T. C., Commerce.....	State.....	1889	Sam H. Whitley.....	110	1,600	694	906	259	37,940	14,213	475,536	1,604,985
* Hardin-Simmons Univ., Abilene.....	Baptist.....	1891	Rupert N. Richardson.....	40	846	395	451	59	417	28,000	1,500,000	1,000,000
* Incarnate Word Coll., San Antonio.....	Catholic.....	1900	Sister M. Columbkille.....	63	538	.....	538	.....	421	2,046,322	23,938	1,945,124
* Mary Hardin-Baylor Coll., Belton.....	Baptist.....	1845	Gordon G. Singleton.....	48	512	.....	512	.....	155	20,200	21,600	1,190,000
* North Texas State T. C., Denton.....	State.....	1890	W. J. McConnell.....	150	2,695	1,074	1,621	98	1,508	870,000	934,795	2,006,399
* North Texas State T. C., San Antonio.....	Catholic.....	1911	John La Salle McMahon.....	54	312	.....	312	30	7,700	2,085,000	.....	.....

Institution and Address	Control or Affiliation	Date Founded	Chief Executive	Faculty ^a	Enrollment, 1942-43				Student Aid, 1942-43 ^c	Endowment ^d	Gifts and Grants, 1942-43	Value of Plant
					Total	Men	Women	Graduate Students ^b				
* Prairie View State Coll., Prairie View.....	State.....	1876	W. R. Banks.....	90	1,185	561	624	28	\$ 4,500	\$ 10,300,000	\$235,053	\$1,951,000
† Rice Inst., Houston.....	Private.....	1912	Edgar Odell Lovett.....	93	1,323	942	381	33	65,319	511,000	511,000	511,000
* Sam Houston State T. C., Huntsville.....	State.....	1879	Harmon Lowman.....	70	856	311	525	45	170	13,052	392,043	1,750,491
† Samuel Houston Coll., Austin.....	Methodist.....	1876	Karl E. Downs.....	36	212	58	174	..	1,123	13,752	21,089	800,000
† Southern Methodist Univ., Dallas.....	Methodist.....	1911	Umphey Lee.....	116	3,880	1,886	1,944	178	1,309	2,452,671	347,798	4,258,099
† Southwestern Univ., Georgetown.....	Methodist.....	1840	J. N. R. Scare.....	48	589	255	334	3	39,200	642,654	30,000	1,504,344
† Southwest Texas State T. C., San Marcos.....	State.....	1899	John Garland Flowers.....	58	1,025	385	640	22	1,079	328,904	328,904	1,872,220
† Stephen F. Austin State T. C., Nacogdoches.....	State.....	1923	Dr. Paul L. Boynton.....	56	522	187	335	1	448	223,074	223,074	1,243,737
† Sul Ross State T. C., Alpine.....	State.....	1920	F. W. Morelock.....	47	386	166	220	39	232	110,840	110,840	1,500,000
† Texas A. and M. Coll. of College Station.....	State.....	1876	H. C. Morkle (e).....	447	6,942	6,942	..	77	1,914	209,000	1,346,849	14,000,000
† Texas Univ. of Austin.....	State.....	1883	Homer P. Rainey.....	408a	16,133	10,283	5,894	714j	181,672	38,816,170j	16,102j	24,372,283j
† Texas Christian Univ., Fort Worth.....	Disc. of Christ.....	1873	M. E. Sadler.....	90	1,625	802	823	277	34,615	3,606,982	90,432	2,463,142
* Texas Coll. of Tyler.....	Col. M. E.....	1894	Domion R. Glass.....	42	493	131	362	..	258	..	20,500	250,000
* Texas Coll. of Arts and Industries, Kingsville.....	State.....	1923	Edward Newton Jones.....	64	762	405	357	32	538	645,986	230,591	1,416,000
† Texas State Coll. for Women, Denton.....	State.....	1901	L. H. Hubbard.....	140	3,352	1,494	1,858	156	50,842	600,486	600,486	4,700,764
† Texas Tech. Agricultural Coll., Lubbock.....	State.....	1925	Clifford B. Jones.....	182	3,042	1,748	1,294	37	1,139	833,250	1,034	5,238,384
† Tillotson Coll., Austin.....	Congregational.....	1877	Mary E. Branch.....	26	602	117	621	..	222	401,800	34,350	387,000
† Trinity Univ., San Antonio.....	Presbyterian.....	1869	Monroe Green Everette.....	28	602	225	877	..	30	14,199	23,356	295,914
† West Texas State T. C., Canyon.....	State.....	1910	J. A. Hill.....	79	1,075	443	632	36	550	601,000	..	2,000,000
† Wiley Coll., Marshall.....	Methodist.....	1873	E. C. McLeod.....	50	382	141	241	..	100	601,000	9,987	500,000
† Brigham Young Univ., Provo.....	L. D. S.....	1875	Franklin S. Harris.....	145	1,687	980	787	80	411	335,000	352,000	2,400,000
† Saint Mary-of-the-Wasatch, Coll. of Salt Lake City.....	Catholic.....	1926	Sister Mary Agnes.....	21	119	..	116	..	86	105,000	..	105,000
* Utah Univ. of Salt Lake City.....	State.....	1850	Leroy E. Cowles.....	194	5,105	3,473	1,642	58	60,000	750,910	1,236	4,000,000
* Utah State Agricultural Coll., Logan.....	State.....	1888	Elmer G. Peterson.....	168	2,181	1,367	814	70	65,000	7,478	1,806,229	3,602,000
† Bennington Coll., Bennington.....	Private.....	1932	Lewis Webster Jones.....	42a	301	..	301	..	11,796	100,093	30,676	1,449,986
† Middlebury Coll., Middlebury.....	Private.....	1800	Samuel S. Stratton.....	72	788	337	431	7	47,534	4,203,704	24,444	2,338,861
† Norwich Univ., Northfield.....	Private.....	1819	J. M. Thomas.....	58	400	..	..	..	27,279	1,021,604	44,388	1,036,608
† St. Michael's Coll., Winooski Park.....	Catholic.....	1904	James H. Petty.....	23	355	322	33	42	39	..	..	350,000
† Vermont Univ. of State Agric. Coll., Burlington.....	State.....	1791	John S. Mills.....	155	1,526	693	833	14	299	120,067	90,000	3,642,922
† Bridgewater Coll., Bridgewater.....	Brethren.....	1880	Paul Haynes Bowman.....	23	248	139	109	..	54	512,255	25,091	444,555
† Emory and Henry Coll., Emory.....	Methodist.....	1836	Foye G. Gibson.....	19	275	139	82	..	116	39,350	92,570	526,890
† Hampton Inst., Hampton [N.].....	Private.....	1888	Ralph P. Bridgman.....	132	1,121	601	520	20	483	9,623,201	309,905	3,668,680
† Hampden-Sydney Coll., Hampden-Sydney.....	Presbyterian.....	1776	Edgar G. Gammon.....	20	331	..	..	..	81	382,940	40,760	1,799,733
† Hollins Coll., Hollins College.....	Private.....	1842	Bessie C. Randall.....	45	341	..	341	..	6,262	438,178	22,653	1,470,901
† Lynchburg Coll., Lynchburg.....	Disc. of Christ.....	1903	R. B. Montgomery.....	20	225	127	98	..	75	7,797	206,948	560,811
† Madison Coll., Harrisonburg.....	State.....	1908	Samuel P. Duke.....	79	1,358	52	1,306	..	607	60,442	..	2,408,000
† Mary Baldwin Coll., Staunton.....	Presbyterian.....	1842	L. Wilson Jarman.....	33	326	..	..	..	641	32,480	75,000	870,000
† Mary Washington Coll., Fredericksburg.....	State.....	1908	Morgan L. Combs.....	149	2,291	15	2,276	..	99	13,714	981,365	3,500,000
† Randolph-Macon Coll., Ashland.....	Methodist.....	1880	J. Earl Moreland.....	72	643	..	643	..	33	1,254,000	10,000	586,028
† Randolph-Macon Woman's Coll., Lynchburg.....	Methodist.....	1893	Theodore H. Jack.....	55	1,551	1,141	410	25	432	2,920,117	7,184	2,070,788
† Richmond Univ. of Richmond.....	Baptist.....	1842	Chas. J. Smith.....	28	306	281	115	..	175	10,000	25,000	780,000
† Roanoke Coll., Salem.....	Lutheran.....	1884	F. J. Jarman.....	56	1,141	..	1,141	..	315	7,427	155,325	1,611,500
† State T. C., Farmville.....	State.....	1910	David W. Peters.....	51	506	..	506	..	636	8,195	5,373	1,227,000
† State T. C., Radford.....	State.....	1901	Meta Glass.....	52	452	..	452	..	26,494	669,887	83,595	1,687,797
* † Virginia Univ. of Charlottesville.....	Private.....	1819	John Lloyd Newcomb.....	199	2,269	2,151	1,118	168	207	11,779,029	129,001	9,584,173
* † Virginia Military Inst., Lexington.....	State.....	1839	Chas. E. Kilbourne.....	59	761	761	..	..	113,480	289,712	22,250	3,000,785
* † Virginia Polytechnic Inst., Blacksburg.....	State.....	1872	Julian A. Burruss.....	242	3,582	3,424	1,158	157	..	349,312	12,411	6,836,809
† Virginia State Coll. for Negroes, Ettrick.....	State.....	1882	Luther H. Foster.....	99	1,008	687	321	11	591	60,083	215,378	2,382,069
† Virginia Union Univ., Richmond [N.].....	Baptist.....	1899	John Malous Ellison.....	24	1,026	308	718	..	11,689	876,426	57,315	1,451,271
* † Washington and Lee Univ., Lexington.....	Private.....	1749	Francis P. Gaines.....	45	678	678	..	..	28,152	3,128,765	48,100	2,861,981
* † William and Mary Coll. of Williamsburg.....	State.....	1693	John Edwin Pomfret.....	90	1,489	782	707	16	46,098	1,382,952	289,815	7,500,000
† Central Washington Coll. of Ed., Ellensburg.....	State.....	1890	Robert E. McConnell.....	72	960	651	309	..	19,294	..	270,867	1,654,000
† Eastern Washington Coll. of Ed., Cheney.....	State.....	1890	Ralph Earle Teje.....	57	681	200	481	..	10,049	..	..	1,414,151

Institution and Address	Control or Affiliation	Date Founded	Chief Executive	Faculty ^a	Enrollment, 1942-43			Student Aid 1942-43 ^e	Endowment ^d	Gifts and Grants 1942-43	Value of Plant
					Total	Men	Women	Graduate Students ^b			
† Gonzaga Univ., Spokane.....	Catholic.....	1887	Francis J. Altman.....	125	1,236	1,236	117	200	\$	628	\$1,100,000
Holy Names Coll., Spokane.....	Catholic.....	1907	Sister M. Elizabeth Chiro.....	38	308	308	117	90	1,700	30,017	197,865
Pacific Lutheran Coll., Parkland.....	Lutheran.....	1894	O. A. Tingstad.....	38	308	308	117	131	120,479	68,450	362,434
Puget Sound Coll. of Tacoma.....	Methodist.....	1898	R. Franklin Thompson.....	43	520	520	213	187	1,250,000	68,450	1,000,000
St. Edward's Seminary, Kenmore.....	Catholic.....	1930	John P. McCormick.....	34	130	130	130	576	13,400	2,600	750,000
St. Martin's Coll., LaCoe.....	Catholic.....	1895	Francis J. Corkery.....	34	1,001	1,001	153	25	9,000	26,792	500,000
Seattle Pacific Coll., Seattle.....	Catholic.....	1892	C. Hoyt Watson.....	31	947	947	164	114	28,674	34,200	319,174
Seattle Coll., Seattle.....	Free Methodist.....	1891	George W. Bowers.....	33	708	708	329	114	59,059	2,185,430	411,471
Washington Coll., College Place.....	Adventist.....	1892	E. O. Holland.....	33	708	708	329	114	59,059	2,185,430	411,471
Washington State Coll. of Pullman.....	State.....	1890	Lee Paul Sieg.....	245	3,552	3,552	1,065	794	195,000	3,032,125	20,000,000
Washington Univ. of Seattle.....	State.....	1861	W. P. Haggard.....	373	9,032	9,032	3,721	610	850,000	413,250	1,855,000
Western Washington Coll. of Ed., Bellingham.....	State.....	1893	W. P. Haggard.....	60	434	434	207	329	12,418	6,614	600,257
Whitman Coll., Walla Walla.....	Private.....	1859	Winifred S. Anderson.....	45	692	692	206	8	18,884	35,000	300,000
Whitworth Coll., Spokane.....	Presbyterian.....	1890	Frank F. Warren.....	23	265	265	114	9	10,272	4,500	1,115,000
West Virginia.....											
† Bethany College, Bethany.....	Disc. of Christ.....	1840	Wilbur H. Cramblet.....	34	523	523	131	4	50,703	2,350,000	1,350,000
Concord Coll., Athens.....	State.....	1872	J. F. Marsh.....	40	523	523	131	4	50,703	2,350,000	1,350,000
Fairmont State T. C., Fairmont.....	State.....	1867	Joseph Reiser.....	44	978	978	326	406	1,800	120,550	1,288,200
Glenville State T. C., Glenville.....	State.....	1872	D. L. Haight.....	22	663	663	308	219	7,040	253,500	800,000
Marshall Coll., Huntington.....	State.....	1837	John Davis Williams.....	118	2,113	2,113	844	44	946	403,800	4,122,000
Shepherd Coll., Shepherdstown.....	State.....	1872	W. H. S. White.....	21	531	531	230	175	7,500	86,500	400,000
West Liberty State Coll., West Liberty.....	State.....	1837	Paul N. Elbin.....	24	531	531	117	414	9,603	91,416	750,000
West Virginia State Coll., Institute [N].....	State.....	1891	John W. Davis.....	41	983	983	385	207	12,000	1,500	2,009,361
West Virginia Univ., Morgantown.....	State.....	1867	Charles E. Laval.....	291	3,141	3,141	1,194	342	8,205,770	3,150	12,000,000
West Virginia Wesleyan Coll., Buckhannon.....	Methodist.....	1890	Joseph Warren Broyles.....	27	952	952	331	93	5,983	73,151	400,544
Wisconsin.....											
Alverno T. C., Milwaukee.....	Catholic.....	1890	Mother M. Correll.....	44	947	947	155	329	19,880	82,374	724,781
Beloit Coll., Beloit.....	Congregational.....	1846	W. Bradley Tyrrell (e).....	50	543f	543f	261	80	15,455	2,274,506	1,418,297
Carroll Coll., Waukesha.....	Presbyterian.....	1846	G. T. Vander Lugt.....	51	467	467	206	45	10,000	1,080,306	1,080,306
† Lawrence Coll., Appleton.....	Private.....	1847	Thomas N. Barrows.....	54	932	932	315	377	20,200	317,000	2,383,000
Marquette Univ., Milwaukee.....	Catholic.....	1864	Raphael C. McCarthy.....	434	5,212	5,212	1,723	1,378	57,349	134,027	5,341,384
Milwaukee-Dowder Coll., Milwaukee.....	Private.....	1851	Lucia R. Briggs.....	51	320	320	320	773	21,086	8,711	1,697,841
Mount Mary Coll., Milwaukee.....	Private.....	1851	Edward A. Mitzpatrick.....	57	970	970	320	773	21,086	8,711	1,697,841
† Ripon Coll., Ripon.....	Private.....	1851	Silas Evans.....	33	315	315	155	470	19,880	82,374	724,781
† St. Norbert Coll., West De Pere.....	Catholic.....	1898	B. H. Penning.....	32	500	500	360	329	19,880	82,374	724,781
State T. C., Eau Claire.....	State.....	1916	W. R. Davies.....	50	598	598	267	327	392	440,000	440,000
State T. C., La Crosse.....	State.....	1909	Rexford S. Mitchell.....	55	598	598	267	327	392	440,000	440,000
State T. C., Milwaukee.....	State.....	1899	Frank E. Baker.....	53	1,228	1,228	394	344f	3,365	211,270	1,416,231
State T. C., Oshkosh.....	State.....	1896	Forrest R. Polk.....	50	993	993	394	344f	3,365	211,270	1,416,231
State T. C., Platteville.....	State.....	1876	Chester O. Newton.....	38	365	365	167	198	2,971	158,191	856,000
State T. C., River Falls.....	State.....	1875	W. H. Times.....	41	424	424	247	177	2,971	158,191	856,000
State T. C., Stevens Point.....	State.....	1894	Wm. C. Hansen.....	47	444	444	207	376	1,220	946,500	974,850
State T. C., Superior.....	State.....	1893	Robert C. Williams.....	51	419	419	166	253	329	5,000	974,850
State T. C., Whitewater.....	State.....	1866	C. M. Yoder.....	52	944	944	377	567	5,000	974,850	974,850
Scout Inst., Menomonie.....	State.....	1893	Burton Edsall Nelson.....	45	515	515	225	290	46	235	1,250,000
† Wisconsin Univ. of Madison.....	State.....	1848	Clarence A. Dykstra.....	1,204	9,466f	9,466f	3,645	833	1,110,137	1,405,007	26,588,905
† Wisconsin Univ. of Laramie.....	State.....	1887	J. L. Morrill.....	261	1,590f	1,590f	611	47	81,476	4,046,213	747
† Wyoming Univ. of Laramie.....	State.....	1887	J. L. Morrill.....	261	1,590f	1,590f	611	47	81,476	4,046,213	747

^a Indicates institutions providing instruction for members of the Army Specialized Training Program.
^b Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^c Institutions offering the Army Air Forces Training Program.
^d Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^e Included in total.
^f Excludes NYA. Includes value of scholarships, etc.
^g Includes appropriations.
^h Indicates institutions providing instruction for members of the Army Specialized Training Program.
ⁱ Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^j Institutions offering the Army Air Forces Training Program.
^k Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^l Included in total.
^m Excludes NYA. Includes value of scholarships, etc.
ⁿ Includes appropriations.
^o Indicates institutions providing instruction for members of the Army Specialized Training Program.
^p Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^q Institutions offering the Army Air Forces Training Program.
^r Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^s Included in total.
^t Excludes NYA. Includes value of scholarships, etc.
^u Includes appropriations.

^v Includes institutions providing instruction for members of the Army Specialized Training Program.
^w Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^x Institutions offering the Army Air Forces Training Program.
^y Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^z Included in total.
^{aa} Excludes NYA. Includes value of scholarships, etc.
^{ab} Includes appropriations.
^{ac} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{ad} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{ae} Institutions offering the Army Air Forces Training Program.
^{af} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{ag} Included in total.
^{ah} Excludes NYA. Includes value of scholarships, etc.
^{ai} Includes appropriations.
^{aj} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{ak} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{al} Institutions offering the Army Air Forces Training Program.
^{am} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{an} Included in total.
^{ao} Excludes NYA. Includes value of scholarships, etc.
^{ap} Includes appropriations.
^{aq} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{ar} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{as} Institutions offering the Army Air Forces Training Program.
^{at} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{au} Included in total.
^{av} Excludes NYA. Includes value of scholarships, etc.
^{aw} Includes appropriations.
^{ax} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{ay} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{az} Institutions offering the Army Air Forces Training Program.
^{ba} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{bb} Included in total.
^{bc} Excludes NYA. Includes value of scholarships, etc.
^{bd} Includes appropriations.
^{be} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{bf} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{bg} Institutions offering the Army Air Forces Training Program.
^{bh} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{bi} Included in total.
^{bj} Excludes NYA. Includes value of scholarships, etc.
^{bk} Includes appropriations.
^{bl} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{bm} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{bn} Institutions offering the Army Air Forces Training Program.
^{bo} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{bp} Included in total.
^{bq} Excludes NYA. Includes value of scholarships, etc.
^{br} Includes appropriations.
^{bs} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{bt} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{bu} Institutions offering the Army Air Forces Training Program.
^{bv} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{bw} Included in total.
^{bx} Excludes NYA. Includes value of scholarships, etc.
^{by} Includes appropriations.
^{bz} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{ca} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{cb} Institutions offering the Army Air Forces Training Program.
^{cc} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{cd} Included in total.
^{ce} Excludes NYA. Includes value of scholarships, etc.
^{cf} Includes appropriations.
^{cg} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{ch} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{ci} Institutions offering the Army Air Forces Training Program.
^{cj} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{ck} Included in total.
^{cl} Excludes NYA. Includes value of scholarships, etc.
^{cm} Includes appropriations.
^{cn} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{co} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{cp} Institutions offering the Army Air Forces Training Program.
^{cq} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{cr} Included in total.
^{cs} Excludes NYA. Includes value of scholarships, etc.
^{ct} Includes appropriations.
^{cu} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{cv} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{cw} Institutions offering the Army Air Forces Training Program.
^{cx} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{cy} Included in total.
^{cz} Excludes NYA. Includes value of scholarships, etc.
^{da} Includes appropriations.
^{db} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{dc} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{dd} Institutions offering the Army Air Forces Training Program.
^{de} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{df} Included in total.
^{dg} Excludes NYA. Includes value of scholarships, etc.
^{dh} Includes appropriations.
^{di} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{dj} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{dk} Institutions offering the Army Air Forces Training Program.
^{dl} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{dm} Included in total.
^{dn} Excludes NYA. Includes value of scholarships, etc.
^{do} Includes appropriations.
^{dp} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{dq} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{dr} Institutions offering the Army Air Forces Training Program.
^{ds} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{dt} Included in total.
^{du} Excludes NYA. Includes value of scholarships, etc.
^{dv} Includes appropriations.
^{dw} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{dx} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{dy} Institutions offering the Army Air Forces Training Program.
^{dz} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{ea} Included in total.
^{eb} Excludes NYA. Includes value of scholarships, etc.
^{ec} Includes appropriations.
^{ed} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{ee} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{ef} Institutions offering the Army Air Forces Training Program.
^{eg} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{eh} Included in total.
^{ei} Excludes NYA. Includes value of scholarships, etc.
^{ej} Includes appropriations.
^{ek} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{el} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{em} Institutions offering the Army Air Forces Training Program.
^{en} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{eo} Included in total.
^{ep} Excludes NYA. Includes value of scholarships, etc.
^{eq} Includes appropriations.
^{er} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{es} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{et} Institutions offering the Army Air Forces Training Program.
^{eu} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{ev} Included in total.
^{ew} Excludes NYA. Includes value of scholarships, etc.
^{ex} Includes appropriations.
^{ey} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{ez} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{fa} Institutions offering the Army Air Forces Training Program.
^{fb} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{fc} Included in total.
^{fd} Excludes NYA. Includes value of scholarships, etc.
^{fe} Includes appropriations.
^{ff} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{fg} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{fh} Institutions offering the Army Air Forces Training Program.
^{fi} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{fj} Included in total.
^{fk} Excludes NYA. Includes value of scholarships, etc.
^{fl} Includes appropriations.
^{fm} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{fn} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{fo} Institutions offering the Army Air Forces Training Program.
^{fp} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{fq} Included in total.
^{fr} Excludes NYA. Includes value of scholarships, etc.
^{fs} Includes appropriations.
^{ft} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{fu} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{fv} Institutions offering the Army Air Forces Training Program.
^{fw} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{fx} Included in total.
^{fy} Excludes NYA. Includes value of scholarships, etc.
^{gz} Includes appropriations.
^{ga} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{gb} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{gc} Institutions offering the Army Air Forces Training Program.
^{gd} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{ge} Included in total.
^{gf} Excludes NYA. Includes value of scholarships, etc.
^{gg} Includes appropriations.
^{gh} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{gi} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{gj} Institutions offering the Army Air Forces Training Program.
^{gk} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{gl} Included in total.
^{gm} Excludes NYA. Includes value of scholarships, etc.
^{gn} Includes appropriations.
^{go} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{gp} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{gq} Institutions offering the Army Air Forces Training Program.
^{gr} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{gs} Included in total.
^{gt} Excludes NYA. Includes value of scholarships, etc.
^{gu} Includes appropriations.
^{gv} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{gw} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{gx} Institutions offering the Army Air Forces Training Program.
^{gy} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{gz} Included in total.
^{ha} Excludes NYA. Includes value of scholarships, etc.
^{hb} Includes appropriations.
^{hc} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{hd} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{he} Institutions offering the Army Air Forces Training Program.
^{hf} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{hg} Included in total.
^{hh} Excludes NYA. Includes value of scholarships, etc.
^{hi} Includes appropriations.
^{hj} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{hk} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{hl} Institutions offering the Army Air Forces Training Program.
^{hm} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{hn} Included in total.
^{ho} Excludes NYA. Includes value of scholarships, etc.
^{hp} Includes appropriations.
^{hq} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{hr} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{hs} Institutions offering the Army Air Forces Training Program.
^{ht} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{hu} Included in total.
^{hv} Excludes NYA. Includes value of scholarships, etc.
^{hw} Includes appropriations.
^{hx} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{hy} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{hz} Institutions offering the Army Air Forces Training Program.
^{ia} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{ib} Included in total.
^{ic} Excludes NYA. Includes value of scholarships, etc.
^{id} Includes appropriations.
^{ie} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{if} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{ig} Institutions offering the Army Air Forces Training Program.
^{ih} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
ⁱⁱ Included in total.
^{ij} Excludes NYA. Includes value of scholarships, etc.
^{ik} Includes appropriations.
^{il} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{im} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
ⁱⁿ Institutions offering the Army Air Forces Training Program.
^{io} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{ip} Included in total.
^{iq} Excludes NYA. Includes value of scholarships, etc.
^{ir} Includes appropriations.
^{is} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{it} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{iu} Institutions offering the Army Air Forces Training Program.
^{iv} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{iu} Included in total.
^{iv} Excludes NYA. Includes value of scholarships, etc.
^{iw} Includes appropriations.
^{ix} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{iy} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{iz} Institutions offering the Army Air Forces Training Program.
^{ja} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{jb} Included in total.
^{jc} Excludes NYA. Includes value of scholarships, etc.
^{jd} Includes appropriations.
^{je} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{jf} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{jj} Institutions offering the Army Air Forces Training Program.
^{jk} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{jl} Included in total.
^{jm} Excludes NYA. Includes value of scholarships, etc.
^{jn} Includes appropriations.
^{jo} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{jp} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{jk} Institutions offering the Army Air Forces Training Program.
^{jl} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{jm} Included in total.
^{jn} Excludes NYA. Includes value of scholarships, etc.
^{jo} Includes appropriations.
^{jp} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{jq} Indicates institutions providing instruction for the Navy under various sections of the Naval Training Program.
^{jr} Institutions offering the Army Air Forces Training Program.
^{js} Numbers followed by the letter (a) include part-time faculty members. All others indicate full-time faculty only.
^{jt} Included in total.
^{ju} Excludes NYA. Includes value of scholarships, etc.
^{kv} Includes appropriations.
^{kw} Indicates institutions providing instruction for members of the Army Specialized Training Program.
^{kx} Indicates institutions providing instruction for the Navy

in the teachers' colleges and normal schools continued in 1943; their enrollment coming to only about 40 per cent of the number preparing for a teaching career in 1939-40, and a drop of 14.7 per cent from 1942. The combined drop for all institutions in 1943 was 8.2 per cent, making a loss of 11.6 per cent of men and 3.5 per cent of women in a year.

Trends. The rapidly growing interest among colleges and universities in the adjustments needed to meet postwar problems was evinced in the several conferences held by representative educational leaders, who evolved the setting-up of the necessary machinery to consider such problems as the assumption that Congress will give consideration to Federal participation in a program of education for men and women mustered out of the armed services and thereby involve an answer to fitting men for jobs through full-time vocational education and providing cultural and civic education for those qualified, etc.; to adjust educational programs to meet the needs of ex-service personnel and of other students; and to find the key to the proper placement of returning service men and women in educational institutions.

In a pamphlet issued by the Universities Committee on Postwar International Problems, the place that should be given to education was analyzed under the following two main assumptions: (1) there should be established a permanent organization of nations for the maintenance of secure and lasting peace and (2) to make education an important function of that organization.

In the interests of its graduates killed in action, Boston University has become the first institution of higher education to establish scholarships by which the children of these men may be granted free and full tuition.

An educational lend-lease plan has been established after two years of study by educators in the United States and abroad that will enable persons from the occupied countries to begin immediate training in American colleges, universities, and technical schools to prepare themselves for work in specific fields of reconstruction and rehabilitation in their own lands after the war.

In what is known as the Specialized Training Program, the Army and Navy have taken over in whole or in part some 300 colleges (see EDUCATION). These particular institutions are indicated in the table (pp. 683-696) by asterisks or daggers. In December, 1943, it was reported that 223 Army Specialized Training Program units were in operation at colleges and universities, as follows:

Field	Units
Basic Phase Curriculum	168
Advanced Engineering (in 5 different curricula)	71
Premedical (to be expanded to about 50)	10
Area and Language Studies (giving instruction in 18 European and 14 Asiatic languages and the appropriate areas in which these languages are used)	55
Personnel Psychology (in 4 units this instruction has been completed)	3
Preparatory Work for the U.S. Military Academy	3
A.S.T.P. Reserve	45

It was expected that by April, 1944, the rate of graduates from these Army programs would exceed 10,000 a month.

The table (pp. 683-696) lists the accredited colleges and universities of the United States with statistics supplied by the institutions for the academic year 1942-43 (unless otherwise noted in footnotes). The list includes those institutions which are accredited (according to the 1943 *Educational Directory*) by one of the seven national or regional accrediting associations, namely the Asso-

ciation of American Universities (national), the New England, Middle States, North Central, Southern, and Northwest Associations of Colleges and Secondary Schools (regional), and the American Association of Teachers Colleges (national).

See EDUCATION and the other topics there listed.

UNRRA. United Nations Relief and Rehabilitation Administration. See RELIEF AND REHABILITATION; UNITED NATIONS; UNITED STATES under *Postwar*. **UPGRADING OF GOODS.** See BUSINESS REVIEW.

URUGUAY. A South American republic. Capital, Montevideo.

Area and Population. Area, 72,153 sq. mi.; population, estimated at 2,146,545 on Jan. 1, 1940. In 1940 living births numbered 42,893; deaths, 20,695. The inhabitants are almost entirely of European descent, with Spanish, Italian, and Portuguese strains predominating. The language is Spanish. During 1940 2,291 foreigners entered the country from overseas and 1,390 departed. The population of Montevideo, with suburbs, was estimated at 770,000 in 1941. Paysandú had about 40,000 in 1940; Salto, 35,000; Mercedes, 24,000.

Defense. A bill for the establishment of compulsory military training was passed in July, 1940, but training remains on a voluntary militia basis. As of Jan. 1, 1941, the active army totaled 8,093 men, the air force 420, and trained army reserves 26,300. There were about 5,000 men in the police force. The navy consisted of 1 old torpedo gunboat, 1 survey ship, 3 patrol vessels, and a few minor craft.

By the law of Dec. 29, 1941, Congress authorized the Government to contract a \$7,800,000 loan from the U.S. Export-Import Bank for the purchase of military, naval, and aeronautical equipment. Under a lend-lease agreement signed Jan. 13, 1942, the U.S. Government agreed to provide Uruguay with additional defense equipment to the reported value of \$17,000,000. With these funds and the proceeds of an internal defense loan, Uruguay expanded and modernized the equipment of its naval, air, and ground forces. An arsenal and several large defense bases were constructed, with the understanding that they would be opened to forces of the United States and other American powers if necessary to defend the continent against aggression from overseas.

Education and Religion. Although primary education is both compulsory and free, nearly 35 per cent of the adult population remains illiterate. There were 1,655 public schools with 193,423 enrolled pupils in 1941. Enrollment in secondary schools was 16,467; in evening courses for adults, 6,465; in the University of the Republic at Montevideo, about 20,000. The majority of the people profess the Roman Catholic faith, but there is complete religious freedom and no state church.

Production. Processing and manufacturing industries normally account for about 59 per cent of the total value of national production, pastoral industries for 24 per cent, and agriculture for about 12 per cent. The estimated value of industrial production in 1941 was 412,000,000 pesos. Value of output of the six leading industries was estimated as follows (in millions of pesos): Foodstuffs, including packing plants, 169.1; beverages, 35.5; textiles and textile products, 35.0; clothing industry, 17.8; metals and manufactures, 16.9; leather and manufactures, 13.7; all other industries (including electric power, gas, water, etc.), 124.0. The packing plants in 1942 purchased 979,511

cattle valued at 51,249,000 pesos, 1,001,910 sheep and lambs valued at 31,292,000 pesos, and 57,198 hogs valued at 2,138,000 pesos. The wool clip was 52,880 metric tons (110,000 bales) in 1941-42 and about 58,915 metric tons in 1942-43. Estimated yields of the chief crops in 1942-43 were (metric tons): Wheat, 339,321; oats, 30,829; barley, 14,791; linseed, 49,000; corn, 50,000; rice, 14,719. Vineyards in 1942 produced 105,552 metric tons of grapes and 18,202,002 U.S. gal. of wine.

Foreign Trade. The "official value" of merchandise imports in 1942 was 47,040,000 pesos (58,431,473 in 1941); "actual values" of exports, 94,440,000 pesos (115,806,163 in 1941). The "actual" or market value was estimated to be about 10 per cent higher than the "official value," the arbitrary price scale upon the basis of which import duties were levied. The United States supplied 25.6 per cent of Uruguay's 1941 imports, Great Britain 14.6, Argentina 13.9, and Brazil 12.6 per cent. Of the 1941 exports, 49.7 per cent by value went to the United States and 26.6 per cent to Britain. Wool, meats and extracts, hides and skins, flaxseed, and live animals were the chief exports.

Finance. By the decree law of Feb. 13, 1943, the general budget for 1942 was extended until June 30, 1943. As modified up to the end of 1942, the budget called for receipts of 112,912,000 pesos and expenditures of 112,649,000 pesos. The fiscal year 1942 started with an accumulated current deficit of 32,100,000 pesos, and with budget estimates as follows: Receipts, 92,187,683 pesos; expenditures, 110,778,333 pesos. Public debt on Mar. 31, 1943: Internal, 358,000,000 pesos; external, 138,000,000 pesos. Average exchange rates of the Uruguayan peso: Official rate, \$0.6583 in 1941 and 1942; free rate, \$0.4338 in 1941 and \$0.5272 in 1942.

Transportation. Uruguay in 1942 had about 1,527 miles of railway line open to traffic, 2,611 miles of roads, and air lines linking Montevideo with the other chief cities of Uruguay and of North and South America. Under construction in 1943 were the Treinta y Tres-Melo section of the Pan American Highway and an improved road from Velazquez to Rocha, connecting the Pan American Highway and coastal roads. During 1939, 1,026 ocean-going vessels and 943 river steamers entered Uruguayan ports. The Uruguayan merchant marine on July 1, 1939, consisted of 247 vessels with a gross tonnage of 35,952.

Government. The Constitution of May 18, 1934, was amended as a result of the national plebiscite held Nov. 29, 1942 (see 1943 YEAR BOOK, p. 733). It vests executive power in a President aided by a Council of Ministers, and legislative power in a Senate of 30 members and a Chamber of Deputies of 99 members, all elected by popular male and female suffrage for four years. Under the 1942 amendments, seats in the Senate are determined by proportional representation and the President has a free hand in selecting his Cabinet. Dr. Juan José Amézaga and Alberto Guani of the Colorado party were elected President and Vice-President respectively on Nov. 29, 1942, and installed on Mar. 1, 1943. As a result of the general election of Nov. 29, 1942, the standing of the parties in the Senate was: Colorados, 18; Herrera wing of the Nationalists (Blancos), 7; Independent Nationalists (Blancos), 3; Catholics, 1. In the Chamber of Deputies, the standing was: Colorados, 61; Herrera wing of Nationalists, 22; Independent Nationalists, 10; Catholics, 3; Communists, 2; Socialists, 1. See below for developments in 1943.

HISTORY

Constitutionalism Restored. The constitutional dilemma and political crisis that led President Alfredo Baldomir to dissolve Congress and assume all governing powers on Feb. 21, 1942 (see 1943 YEAR BOOK), was peacefully terminated early in 1943. The Council of State, created by Baldomir on Mar. 8, 1942, to revise the constitution and to advise him on other governmental matters, was dissolved Feb. 12, 1943. On February 15 the new bicameral Congress, elected on Nov. 29, 1942, held its first session. The inauguration of President-elect Juan José Amézaga and Vice President-elect Alberto Guani took place as scheduled on March 1, with ceremonies attended by representatives of all the countries in diplomatic relations with Uruguay. United States and Argentine naval detachments participated in the inaugural military review.

Members of President Amézaga's Cabinet, announced the same day, were: Minister of Foreign Affairs, José Serrato; Interior, Héctor A. Gerona; National Defense, Gen. Alfredo R. Campos; Finance, Ricardo Cosío; Labor, Tomás Barreta; Industry and Commerce, Javier Mendivil; Public Health, Luis Mattiauda; Agriculture, Arturo González; Chief of Police, Juan Carlos Gómez Folle. In his first speech as Foreign Minister on March 2, Serrato pledged himself to follow the pro-democratic and pro-United Nations policies of President Baldomir and the latter's Foreign Minister, Dr. Guani. Serrato had been active as chairman of the Pro-Ally Committee in defeating the policies of the nationalist and pro-Axis elements led by Senator Luis Alberto de Herrera. Thus Baldomir achieved the objective of his 1942 coup—the establishment of a constitutional regime able to function in accordance with the strongly pro-democratic sympathies of the large majority of the Uruguayan people.

Aid from United States. The foregoing political transition assured the continuance and extension of Uruguay's close political, military, and economic collaboration with the United States. Adm. Jonas H. Ingram, commander of U.S. naval forces in the South Atlantic, and the U.S. Ambassadors to Montevideo and Buenos Aires conferred with Uruguayan governmental leaders on defense problems at the time President Amézaga was inaugurated. At the conclusion of these discussions, Admiral Ingram announced that Uruguayan military bases would be placed at the disposal of U.S. naval forces in the event of an Axis attack upon South America. This was the understanding under which Washington had advanced extensive lend-lease and other financial aid to Uruguay in 1942 (see 1943 YEAR BOOK).

On March 7 the Uruguayan Government announced that it had rented to the United States the former German tanker *Tacoma*, which was interned in Montevideo harbor after serving as the supply ship for the ill-fated German pocket battleship *Graf Spee*. Another anti-Axis step followed on May 12, when Uruguay broke off diplomatic relations with the Vichy Government in France. Officials of the French Legation in Montevideo, who repudiated Vichy at about the same time, were permitted to continue to represent French interests. Under Dr. Guani's leadership, the inter-American Emergency Advisory Committee for Political Defense of the Continent continued from Montevideo its vigorous campaign against Axis spies and propagandists (see PAN AMERICANISM).

Further important financial and economic aid was forthcoming from Washington in return for

Uruguayan collaboration. Vice President-elect Guani arrived in the United States toward the end of January in search of a large loan to tide his country over an acute economic crisis. He was warmly received because of the valuable support he had given Washington's "good neighbor" policy and the cause of inter-American solidarity. On February 4 he signed an agreement under which the Export-Import Bank agreed to advance Uruguay an additional credit of \$20,000,000 to finance a program of public works and agricultural projects. This loan was approved by the Uruguayan Cabinet on April 27 after some changes in provisions of the contract to which members of the Government had objected.

Washington also gave Uruguay priorities for the export and transportation of generators and other machinery for the Rio Negro hydroelectric project. (The Export-Import Bank advanced a \$12,000,000 credit for the purchase of this machinery in 1942.) American technicians were also made available to supervise the installation of this equipment. Meanwhile Uruguay continued to receive military equipment and supplies from the United States under the lend-lease agreement of 1942. The acute scarcity of fuel and other imported commodities was relieved to a substantial degree in July through the allocation of shipping space and supplies by Anglo-American agencies. On October 23 it was announced in Montevideo that the Uruguayan Government had accepted a gift of \$500,000 from the Office of the Coordinator of Inter-American Affairs in Washington for a program of sanitation and public health.

Economic Conditions and Measures. The \$20,000,000 loan obtained from the Export-Import Bank in January was intended to counteract an acute economic depression. The depression developed as a result of the wartime scarcity of shipping which had deprived the republic of essential imports of coal, oil, iron and steel, newsprint, drugs, chemicals, sugar, and many other items. Despite Government efforts at rationing and price control, there was an alarming increase in the cost of living accompanied by a general deterioration in living standards except in certain favored industries.

This difficult situation was aggravated by a severe drought that developed in September, 1942, and continued with but little relief until the following March. As a result of the drought, cattle growers lost an average of 15 per cent of their herds. In some parts of the republic losses were 60 per cent. The 1942-43 harvest was from one-fourth to one-third below normal. The financial loss on cattle alone due to the drought was estimated at 40,000,000 pesos.

Abundant rainfall and a mild winter, Government credits for irrigation and erosion-control projects, aid to agricultural labor, and the arrival of much-needed fuel and other imports all served to produce a gradual improvement of economic conditions during the latter half of the year. An important new meat contract was concluded with the British Government in November. It provided for the delivery to Britain during 1944 of 25,000 tons of frozen beef, 20,000 tons of corned beef, 1,400 tons of dehydrated beef, and 18,000 tons of army rations.

Economic stringency provoked growing demand for a reduction of Government expenditures and the balancing of the budget. Accordingly the Government established a National Economic Council to study economic and financial problems and propose solutions. Meanwhile the Government continued with its long-term program of social and

economic reform. It was announced early in 1943 that more than 1,000 one- and two-family low-rent modern dwellings had been completed in the suburbs of Montevideo. Plans were under way for the construction of low-rent apartment houses of the same type near the center of the capital. The republic's comprehensive social security program was extended to include all types of agricultural workers with the issuance of a new decree-law on January 20.

See ARGENTINA under *History*; SPANISH-AMERICAN LITERATURES; WORLD WAR (for table showing severances of diplomatic relations with the Axis powers).

USDA. See AGRICULTURE, U.S. DEPARTMENT OF.

USKOL. See RUBBER.

USO. See UNITED SERVICE ORGANIZATIONS.

U.S.S.R. See UNION OF SOVIET SOCIALIST REPUBLICS.

USTACHI. See YUGOSLAVIA under *History*.

UTAH. A mountain State. Area: 84,916 sq. mi. Population: 550,310 (1940 census); 583,970 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Herbert B. Maw (Dem.), inaugurated in January, 1941, for a four-year term; Secretary of State, E. E. Monson, Attorney General, Grover A. Giles, See AQUEDUCTS; COPPER; LEAD; SILVER.

UTILITIES. See ELECTRICAL LIGHT AND POWER.

UZBEK SOVIET SOCIALIST REPUBLIC. See UNION OF SOVIET SOCIALIST REPUBLICS under *Area and Population*.

VANADIUM. A sharp drop in the production of high speed tool steel, for which vanadium finds its principal use, enabled United States production to outstrip greatly requirements in 1943 and permitted the building of a substantial stockpile. In November, 1942, melting of high speed tool steel totaled 11,857 tons. By August, 1943, this had dropped to 5,815 tons. Thus, between November, 1942, and September, 1943, allocations of vanadium by the War Production Board dropped 40 per cent. Vanadium was removed from allocation Jan. 1, 1944.

During the 12 months through October, 1943, vanadium allocations totaled 3,366,000 lb.; consumption, 3,550,000 lb. During the first six months of 1943, consumption was at a monthly rate of 296,000 lb.; during July and August, the monthly rate dropped 12 per cent to 258,500 lb. At the end of October, 1943, War Production Board estimated 1943 production would be 5,700,000 lb. of contained vanadium.

The drop in vanadium consumption is expected to continue into 1944, it being estimated that 948,000 lb. will be required for the first quarter and 941,000 lb. for the second quarter. On Oct. 8,

1943, the War Production Board ferro-alloys branch wrote the armed services that it anticipated an excess of 2,500,000 lb. of vanadium in 1944, requesting the services to indicate what quantities should be reserved for their consumption and pointing out that if current requirements could not absorb production, curtailment would have to be considered.

By Oct. 15, 1943, Metals Reserve Co., Federal ore-buying agency, had received deliveries of 2,562,776 lb. of ferro-vanadium toward the 3-million-lb. stockpile which the War Production Board had asked it to assemble, and there were indications that the undelivered balance represented merely a matter of transfer from producers' stocks. The War Production Board ferro-alloys branch regards two million lb. of contained vanadium in products (ferro-vanadium or vanadium pentoxide) as a minimum stock which should be maintained above ground at all times for the sake of national security. On the basis of new consumption figures, this stock approximates a six months' supply. The desired figure was reached as early as August 31.

As in previous years, Peru and the United States (principally mines in Colorado and Utah) were the leading producers.

On Nov. 3, 1943, the Office of Price Administration translated the ceiling price of ferro-vanadium, formerly under the General Maximum Price Regulation, into a specific dollars and cents ceiling. Ceilings set were: ferro-vanadium, open hearth \$2.70; crucible \$2.80; primes \$2.90, per lb. of contained vanadium. See *CHEMISTRY*; *GEOLOGICAL SURVEY*.

CHARLES T. POST.

VARLIK LAW. See *TURKEY* under *History*.

VATICAN CITY. A sovereign state, officially known as the State of Vatican City, established within the city of Rome as the seat of the Papacy on June 10, 1929, in accordance with the Italo-Vatican (Lateran) Treaty of Feb. 11, 1929 (see 1929 *YEAR BOOK*, p. 417). Sovereign in 1943, Pope Pius XII (Eugenio Pacelli), who succeeded Pius XI Mar. 2, 1939.

The area of Vatican City is 108.7 acres, including St. Peter's Square, and in addition 13 ecclesiastical buildings outside of its limits enjoy extraterritorial rights. It has its own coinage, import duties, railway station, and its postal, telegraph, and radio facilities. The estimated population in 1941 was 970. Under the Constitution of June 7, 1929, the Pope exercises full legal, judicial, and executive powers. He delegates administrative authority within Vatican City to a governor (Enrico Galeazzi), who is assisted by a counselor general and other officials. The legal system is based on canon law and ecclesiastical rules. The chief advisers of the Pope are the members of the College of Cardinals, who are appointed by him for life and elect his successor upon his death. From Vatican City the 11 committees forming the Curia Romana carry on the central administration of the Roman Catholic Church. Relations between the Church and the governments of the world are conducted by the Papal Secretary of State (Luigi Cardinal Maglione was appointed to this office Mar. 11, 1939). The Holy See in 1943 maintained diplomatic relations with 35 governments and had unofficial relations by means of Apostolic Delegates with a number of other countries, including the United States. See *UNION OF SOVIET SOCIALIST REPUBLICS* under *History*. Also see references under *ROMAN CATHOLIC CHURCH*.

VEGA B-34 AND PV-1. See *AERONAUTICS* under *Types*.

VENEREAL DISEASE. See *FEDERAL SECURITY AGENCY*; *JUVENILE DELINQUENCY*; *PHILANTHROPY* under *Reynolds Foundation*; *PUBLIC HEALTH SERVICE*; *STATE LEGISLATION* under *Social Legislation*.

VENEZUELA. A republic of South America, consisting of a Federal District, 20 States, and two Territories. Capital, Caracas.

Area and Population. Area, 352,170 square miles; population, 3,943,239 (including 103,492 Indians) at the 1941 census and 3,996,096 (estimated) in 1942. The people are mainly of mixed Spanish and Indian blood, with a strong infusion of Negro blood along the coastal lowlands. Foreigners (1942) numbered 33,711. Population of the Federal District, including Caracas, 377,434 in 1941. Populations of the capital city and five largest State capitals in 1936 were: Caracas, 203,342; Maracaibo (State of Zulia), 110,010; Barquisimeto (Lara), 50,774; Valencia (Carabobo), 49,963; Maracay (Aragua), 29,255; and San Cristobal (Tachira), 22,058. Registered living births in 1941 numbered 134,384; deaths, 62,382; marriages, 15,877.

Defense. As of Jan. 1, 1941, Venezuela had an active army of 11,373 men, including 373 in the air force, and 7,500 trained reserves. The navy comprised five gunboats and patrol vessels and various auxiliary craft. A U.S. naval mission was engaged in 1941 for four years. Under a lend-lease agreement signed Mar. 18, 1942, the U.S. Government agreed to supply arms and other equipment for modernization of Venezuela's defenses. In April American troops arrived to assist in training Venezuelan forces (see 1943 *YEAR BOOK*, p. 736).

Education and Religion. Over 50 per cent of the adult population is illiterate. In December, 1941, there were 260,420 pupils in 4,970 public primary schools, and 4,499 pupils in 83 secondary and special schools (public and private). There are two universities (at Mérida and Caracas) and a School of Geology at Maracaibo (see *History*). Roman Catholicism is the predominant religion.

Production. Agriculture, stock raising, petroleum mining, manufacturing, pearl fishing, and forestry are the principal occupations. Coffee production was 650,000 bags (of 132 lb.) in 1942-43; cacao, 12,200 metric tons in 1941; sugar, about 37,500 short tons in 1941-42; tobacco, about 3,800,000 lb. annually; cotton, about 3,000 metric tons in 1941-42. Corn and other vegetables and fruits are widely grown. There are estimated to be 3,000,000 cattle and 2,000,000 sheep and goats.

Petroleum production in 1941 reached the record level of 225,000,000 bbl. or 33,353,770 metric tons, giving Venezuela second place among oil-producing countries. Output of other minerals was: Diamonds, 29,417 carats in 1941; gold, 4,565 kilograms in 1940 (bullion to the value of 15,995,485 bolivares exported in 1941); coal, about 5,000 metric tons annually. Iron ore, copper, magnesite, salt, mercury, and asbestos also are mined. Manufacturing is confined largely to textiles, wood and leather products, cement, glass, tires, and canned meats. A modern meat canning factory was opened at San Fernando de Apure in 1943.

Foreign Trade. Imports in 1941 totaled 287,735,292 bolivares and exports 1,061,564,661 bolivares. Petroleum and its products accounted for 1,000,558,886 bolivares of the exports; coffee, 23,940,449; gold bullion, 15,995,485; cacao, 6,055,531; cattle and hides, 2,056,001. Of the total exports, Aruba and Curaçao took 393,511,720 and 355,-

003,943 bolívares respectively (mostly oil for refining); United States, 226,590,639; Canada, 22,080,015; Argentina, 15,889,111; Brazil, 10,544,494; Great Britain, 9,363,169. The chief sources of imports were (in bolívares): United States, 226,837,622; Great Britain, 17,179,743; Brazil, 9,663,227; Canada, 4,600,203; Argentina, 4,558,760; Sweden, 2,503,265; Ecuador, 2,318,772.

General imports in 1942 were valued at 215,760,000 bolívares, including bullion and specie. Export statistics were withheld for military reasons.

Finance. For the fiscal year ended June 30, 1942, actual budget revenues were 325,287,387 bolívares and expenditures 320,121,932 bolívares (about 296,000,000 and 320,000,000, respectively, for 1942-43). For 1943-44, nonloan revenues were estimated at 316,693,000 and expenditures at 348,500,700 bolívares. The debt of the National Government on Dec. 31, 1942, was 15,495,000 bolívares, excluding \$4,265,000 lent to semigovernmental agencies by the U.S. Export-Import Bank. The free market exchange rate of the bolívar averaged \$0.2660 during July-December, 1941, and \$0.2899 in 1942.

Transportation. Including the newly completed El Palito-Palmasola Railroad, Venezuela in 1943 had about 640 miles of railway line. Highways extended over 5,882 miles. The Director of Roads reported on Apr. 19, 1943, that a 780-mile stretch of the Venezuelan section of the Pan American Highway was open to traffic, there being 180 miles paved with concrete and 600 miles hardened with other materials. The chief cities are connected by a government-owned airline. The Royal Dutch Airways links the coastal cities with Aruba and Curaçao, while Pan American Airways provides connections with the hemisphere air network. In 1941, 59.26 per cent of all exports by value passed through Maracaibo, 11.40; Puerto La Cruz, 11.34; Carapito, 9.88 per cent. Of the imports, 52.74 per cent by value passed through La Guaira, Maracaibo, 19.11; Puerto Cabello, 10.03; Puerto La Cruz, 9.21 per cent.

Government. The Constitution of July 11, 1936, vests executive powers in a President elected by Congress for five years and ineligible for reelection. There is a Senate of 40 members chosen by the State legislatures and a Chamber of Deputies of 87 members elected by municipal councils. The State legislatures and municipal councils are elected by direct ballot of literate males 21 or more years of age. The Constitution prohibits communism and anarchism. President in 1943, Gen. Isaias Medina Angarita, who assumed office May 5, 1941. Venezuela severed diplomatic relations with Germany, Italy, and Japan on Dec. 31, 1941. For 1943 developments, see below.

HISTORY

Internal Politics. Elections to the Senate and Chamber of Deputies, held by the State Legislatures and Municipal Councils respectively on Jan. 19, 1943, returned pro-Government candidates to nearly every seat at stake. There were no specific issues beyond general support of the policies of the Medina Government. The President's backers won an important victory over a reactionary organization in the State of Lara. Senator Alberto Ravell, who made a sensational exposé of fifth-column activities in 1942, was defeated for reelection in the State of Yaracuy. A considerable number of the new members of Congress, which convened April 19, were political prisoners or exiles during the long dictatorship of President Juan Vicente Gómez. Among them was Senator Jovito

Villalba, who spent seven years in Gómez dungeons.

Included among the new Congressmen were several outspoken opponents of President Medina's Government, elected by the opposition *Acción Democrática* party. With the 1945 Presidential election in the offing, the Government was also facing the possibility of opposition from wealthy and influential conservative elements. These considerations were believed to have inspired President Medina's decision to establish an official government party with mass support. On April 15 he sent a telegram to officials of the Federal District, States, and Territories calling for the formation of a political party that would "clearly and legitimately further the formation of groups that would fight for candidates who agreed to defend, with conviction, the political principles of the present Government."

Political activity had been banned altogether under the 27-year Gómez dictatorship and no well-defined political parties had evolved during the administration of Gómez's successor, President Eleazar López Contreras. President Medina's move was attacked by some critics as an attempt to establish a one-party dictatorship and praised by others as a positive step in the direction of representative government. In his message to Congress on April 27, Medina said that his aim was to reconcile the diverse social and ideological groups within the country and to execute the will of the majority. His liberal attitude was reflected in the composition of a new Cabinet formed on May 4, following a crisis provoked by press criticism of Minister of Development Eugenio Mendoza Jr. Three of the five new Ministers appointed were liberals.

The President further outlined his political objectives in addressing the organizers of the Government party on May 26. The Government, he said, was determined to prevent any return of dictatorship in Venezuela. Expressing his belief in the desirability of alternating executives, he indicated that he would not be a candidate for reelection in 1945. The tentative platform of the new party, officially known as *Partidarios de la Política del Gobierno*, called for direct Presidential elections, encouragement of immigration and other measures to develop the nation industrially and agriculturally, extension of education and public health activities, modernization of the armed forces, and closer economic and cultural relations with democratic nations, especially those American republics favoring continental solidarity.

Another reshuffling of the Cabinet took place on November 18 after the Ministers of Interior and Labor had been forced to resign by criticism from labor organizations and the Leftist press, provoked by the handling of a bus-drivers' strike. New Ministers were named to the Interior, War, Treasury, Labor, and Agriculture portfolios. Meanwhile the President continued to administer national affairs with the aid of the emergency powers conferred upon him June 13, 1942.

Oil Concessions Revised. A measure which greatly increased the President's popularity among the masses was the successful conclusion of the negotiations for a revision of the foreign oil concessions that were opened in 1942 (see 1943 YEAR BOOK, p. 737). Draft legislation incorporating the Government's proposals was submitted to representatives of the oil companies on February 6. Negotiations were continued and reciprocal concessions made until both the Government and the companies professed themselves satisfied. The revised oil

legislation was then passed by a special session of Congress and signed by the President on March 13. The cordiality with which these negotiations were conducted was emphasized at a subsequent state dinner which the Government tendered to representatives of the oil companies to thank them for their cooperation in the formulation and passage of the legislation.

The new law placed all oil companies and concessions in a fixed and equal position with relation to the state. It increased royalty payments to the Government to 16% per cent of the value of production from an average of 11 per cent. Surface rentals paid by oil concessionaires also were raised from the previous minimum of 2 bolívars per acre to 5 bolívars annually. Maximum rentals of 30 bolívars per acre were to apply only to those companies failing to develop their holdings. The tariff exemption previously granted the oil companies on imports of machinery and supplies was terminated, with the Government receiving discretionary powers to suspend duties on equipment imported for the construction of new oil plants.

Moreover, the companies agreed to expand the capacity of refining plants in Venezuela after the war to 202,000 barrels daily, or about two and one-half times the existing capacity. The companies also agreed to pay 25,000,000 bolívars in back taxes that had been in dispute. President Medina estimated that the royalties received during 1943 alone under the new oil law would total about 50,000,000 bolívars more than if the old agreements had remained in effect. The Government's oil revenues in 1942 amounted to 63,561,411 bolívars. The companies agreed to these important changes because their concessions—some of which were about to expire—were automatically extended for another period of 40 years. For a detailed study of the new law, see *Foreign Commerce Weekly*, July 10, 1943, p. 5.

Economic Development. Increased oil revenues assisted the Government substantially in financing its program of industrial and agricultural development as well as the four-year plan for the development of the interior adopted in 1942 (see 1943 YEAR BOOK). Another source of additional revenue was the income tax—the first in Venezuela's history—adopted in 1942 and placed in effect Jan. 1, 1943. The estate of President Gómez, confiscated by the Government upon the dictator's death in 1935, yielded a profit of \$527,436 in the fiscal year 1941-42, according to an announcement made in May, 1943. U.S. Government loans and financial grants provided still another source of funds for the Venezuelan development program.

The extensive program of public works announced for the fiscal year 1943-44 included four airfields, a shipyard on the Orinoco, new warehouses at La Guaira and Puerto Cabello, port works in Cumaná and La Guaira, and new schools, hospitals, sanitation and defense works, etc. Approximately \$3,300,000 was appropriated for a 1,000-bed hospital and a school for doctors, nurses, and laboratory technicians to form part of the new plant of the Central University at Caracas. Plans called for the building of a completely new and American-style university city on a hacienda in the outskirts of the capital.

The development program was slowed during 1943 to some extent by inability to import the necessary equipment and materials. However President Medina reported in his annual message to Congress that there had been an expansion of both industry and agriculture, partly as a result of Government assistance. Moreover the accumulation of

large gold and foreign exchange reserves made possible the postwar acquisition of the machinery and other equipment needed to continue the development program.

United States Cooperation. President Medina on April 27 said that difficulties in the foreign exchange situation had impeded the prompt use of the \$12,000,000 credit advanced by the Export-Import Bank of Washington to the Agricultural and Cattle Bank of Venezuela in December, 1942, for increasing agricultural and fisheries production. Of the \$12,000,000 credit, half was allocated to finance the coffee and cocoa crops of 1943 and 1944, while the other half was to be used to finance the long-range agricultural expansion program. In addition to this \$12,000,000 credit, the Venezuelan Government or its agencies had received during 1942 a \$20,000,000 public works credit, and a \$6,700,000 credit for a housing project in Caracas, also from the Export-Import Bank of Washington, as well as a promise of lend-lease arms and supplies (see 1943 YEAR BOOK).

There was a further extension of financial and technical aid from the United States during 1943. Intensification of the anti-malaria campaign in Venezuela and initiation of other public health projects were provided for in a health and sanitation agreement effected by an exchange of notes between the U.S. and Venezuelan Governments on February 18. An accord for the development of foodstuffs production in Venezuela was reached through another exchange of notes signed May 14. This one-year agreement bound the Venezuelan Government to establish a special office for the execution of a food plan to be formulated by the Ministry of Agriculture and Animal Husbandry in collaboration with a Food Production Mission to be sent to Venezuela by the Institute of Inter-American Affairs at Washington. U.S. financial contributions were understood to have been agreed upon under both these agreements.

A technical commission from the United States was at work in 1943 studying the inland waterway system, and particularly the Orinoco River network, with a view to the development of water transportation. The U.S. military mission sent to Venezuela in March, 1942, to train Venezuelan artillery units in the use of American guns left the country in March, 1943. The action of Anglo-American oil companies in refusing to furnish fuel oil for the German-owned railway linking Caracas and Valencia forced it to suspend service. The Venezuelan Government then moved to expropriate the line on November 13.

Other Foreign Relations. In furtherance of his policy of close cooperation with neighboring countries, President Medina in August made a tour of the capitals of Colombia, Panama, Ecuador, and Peru, where he was cordially received. It was announced in October that he would visit the United States in the near future.

See JUVENILE DELINQUENCY; ROADS AND STREETS; SPANISH-AMERICAN LITERATURES; URUGUAY under *History*; WORLD WAR.

VENTILATING. See HEATING AND VENTILATING.

VERMONT. A new England State. Area: 9,609 sq. mi. Population: 359,231 (1940 census); 322,061 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS;

SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is William H. Wills (Rep.), inaugurated in January, 1943, for his second two-year term; Lieutenant Governor, Mortimer R. Proctor; Secretary of State, Rawson C. Myrick; Attorney General, Alban J. Parker.

VETERANS. See AMERICAN LEGION; the article which follows; also, CIVIL SERVICE COMMISSION and ARMED FORCES under *Demobilization*. For **Veterans' Rehabilitation Funds**, see STATE LEGISLATION under *War and Postwar*.

VETERANS' ADMINISTRATION. On June 30, 1943, there were in force 586,590 U.S. Government life insurance policies representing \$2,499,603,842 of insurance. Disbursements for this type of insurance during the fiscal year 1943 totaled \$39,814,670. Monthly payments on yearly renewable term insurance policies were being made to 9,717 permanently and totally disabled veterans and the beneficiaries of 4,683 deceased veterans. Monthly payments on automatic insurance policies were being made to 224 disabled veterans and the beneficiaries of 19 deceased veterans. Disbursements for term and automatic insurance during the fiscal year 1943 were \$14,489,489. During the fiscal year 1943, there were approved 8,083,330 applications for National Service Life insurance aggregating \$59,696,515,000 of insurance. Disbursements during the fiscal year 1943 for this type of insurance totaled \$6,549,351. Through June 30, 1943, there had been received 67,054 applications for insurance benefits under the Civil Relief Act of Oct. 17, 1940. Of this number 53,080 applications representing \$127,575,186 of insurance had been approved.

On June 30, 1943, the total hospital load of the Veterans' Administration was 56,897 patients, of whom 56,641 were United States veterans. Of the United States veterans, 54,013 were in Veterans' Administration facilities, 1,680 in other Government hospitals, and 948 in State or civil institutions. On the same date, the veteran population in domiciliary status in Veterans' Administration facilities totaled 8,997. In addition to the hospital and domiciliary load, an average of 4,898 veterans was cared for in State or Territorial homes during the fiscal year 1943.

Payments for pension, compensation, or retirement pay were, on June 30, 1943, being paid to 621,581 living veterans and to the dependents of 238,508 deceased veterans. The net disbursements during the fiscal year 1943 for this purpose totaled \$442,873,819.

The net disbursements made by the Veterans' Administration during the fiscal year 1943 from all appropriations and trust funds totaled \$643,406,394. This amount includes adjustments on lapsed appropriations but does not include disbursements from trust funds for investment purposes. See AMERICAN LEGION; SELECTIVE SERVICE SYSTEM.

FRANK T. HINES.

VICTORIA. See AUSTRALIA, *Area and Population*.

VICTORY BOOK CAMPAIGN. See LIBRARY PROGRESS.

VICTORY GARDENS. See AGRICULTURE.

VICTORY SCRAP BANK. See WAR PRODUCTION BOARD under *Salvage*.

VICTORY SHIPS. See SHIPBUILDING.

VICTORY TAX. See TAXATION.

VIREECK CASE. See LAW under *War Decisions*.

VIRGINIA. A south Atlantic State. Area: 40,815 sq. mi. Population: 2,677,773 (1940 census); 2,767,789 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Colgate W. Darden, Jr. (Dem.) inaugurated in January, 1942, for a four-year term; Lieutenant Governor, William M. Tuck; Secretary of State, Ralph E. Wilkins; Attorney General, Abram P. Staples.

VIRGIN ISLANDS. An insular possession of the United States, situated about 70 miles east of San Juan, Puerto Rico. This possession forms part of the chain of the Lesser Antilles which extends from Puerto Rico to the coast of South America. When needful for distinction, and commonly abroad, the U.S. territory is known as the Virgin Islands of the United States. Of the 50 islands in the group only the three largest are inhabited—St. Thomas, St. John, and St. Croix. Total area, 132 square miles; population, 24,889 in 1940; 22,012 in 1930. Areas and populations (1940) of the individual islands; St. Thomas, 28 square miles, 11,265 inhabitants; St. John, 20 square miles, 722 inhabitants; St. Croix, 84 square miles, 12,902 inhabitants. Of the whole population, 69 per cent in 1940 were Negroes, 22 per cent of mixed race, 9 per cent whites; 1939's birth rate 35.8, death rate 20.9, per 1,000. Capital, Charlotte Amalie (pop. 9,801 in 1940) on the island of St. Thomas. Illiteracy is practically confined to the population over 21 years of age (16 per cent in 1930), and with few exceptions, everyone speaks English.

Defense. After 50 years of intermittent negotiations the United States acquired the Danish West Indies through a treaty with Denmark in 1917 for \$25,000,000. The islands are the most eastern outpost of the United States and when defenses are completed will furnish protection both to U.S. holdings in the Caribbean Sea and the Panama Canal. The fine harbor of Charlotte Amalie provides shelter for as many as 23 warships at one time. Construction of defenses in this region during the past few years have been primarily to bulwark the great naval, military, and air bases in Puerto Rico. In 1935 a permanent U.S. Marine Corps air base was built near Lindbergh Bay on the island of St. Thomas; in 1940 the construction of additional land and seaplane facilities there was authorized. A large submarine base was started in 1939 at Charlotte Amalie Harbor. A U.S. Army air base was constructed on St. Croix near Frederiksted. Work on military and naval installations

gave employment to every employable male throughout 1942, but in 1943, when most of the defense projects had been completed, unemployment again began to loom as an economic problem.

Production and Trade. The basic economies of the islands of St. Thomas and St. Croix have differed for more than 200 years. This difference has been increased by wartime activities. St. Thomas has largely depended upon commerce, trade, and shipping. Its resources have grown by defense activities from an estimated municipal revenue of \$249,000 to nearly \$694,000. Thus, for the first time since the acquisition in 1917, the Municipality of St. Thomas and St. John has been able to finance itself without Federal deficit appropriations. On the other hand the Municipality of St. Croix has depended chiefly upon agriculture for its revenues. During the last five years there have been repeated droughts resulting in decreases in sugar production and cattle raising. Employment, another factor in maintaining sufficient revenues, was at its peak on the island of St. Thomas in 1942 where extensive military preparations were under way. But on St. Croix, where there was unemployment, partial relief was extended through activities of the Work Projects Administration and the National Youth Administration. This situation afforded only temporary relief since work relief as a Federal policy was abandoned by Congress in 1943. Unemployment again rose to plague the island.

For the fiscal year ended June 30, 1943, actual revenues of the municipality of St. Thomas and St. John were \$693,801 (\$599,117 in 1941-42) while total budget appropriations were \$609,254 in 1942-43 (\$588,000 in 1941-42). Revenues of the municipality of St. Croix were \$194,441 in 1942-43 (\$196,486 in 1941-42), budget appropriations \$353,800 (301,845), and the Federal deficit appropriation, \$114,800 (\$105,000). The Federal appropriation for the Government of the Virgin Islands in 1942-43 totaled \$300,420, of which \$151,075 was for the central administration, \$37,650 for the agricultural experiment station, and \$114,800 for the deficit of the municipality of St. Croix. A supplemental deficiency appropriation of \$66,750 was pending before the U.S. Congress on June 30, 1943.

Government. During the first 14 years of American control the Virgin Islands had a naval government. But in 1931 jurisdiction was transferred from the Navy Department to the Department of the Interior and a civil governor was appointed by the President. Congress passed an Organic Act for the islands in 1936 which effected little change in the structure of the government although it did allow for a greater measure of political freedom. The autonomy of the two municipalities was retained and both have Municipal Councils, which when called in joint session, constitute the Legislative Assembly. Under this system public education is a municipal function. There are two separate school systems—one for the Municipality of St. Thomas and St. John, and the other for the Municipality of St. Croix. Each has its own Superintendent of Education, appointed by the U.S. Secretary of the Interior; and each has its own board of education. Appropriations for education are included in the separate budgets. Both municipalities maintain schools on the elementary and secondary levels. Yet only about 5 per cent of the school population is enrolled in the senior high school. Private schools, denominational in character, enroll about 30 per cent of the children of school age. The Governor is appointed by the President and holds office at

his pleasure. Governor in 1943, Charles Harwood, who took office on Feb. 3, 1941.

History. Hearings were held during May, 1943, by Congress on a bill "to assist in relieving economic distress in Puerto Rico and the Virgin Islands by providing work for unemployment, and for other purposes." On June 5, 1943 a sub-committee of the House Committee on Insular Affairs visited the Virgin Islands to investigate economic conditions. But no action was taken in this matter during the calendar year of 1943. Governor Harwood reported late in the year that, through the efforts of the Department of the Interior and the Food Distribution Administration, the food shortages during the first half of the fiscal year were supplemented so that a sufficient supply was assured for the end of the year. The Selective Service Act was made applicable to the Virgin Islands in October, 1943. Shortly thereafter eligible males were called up for military duty in the U.S. armed forces. Details of the operations of Draft Boards in the Virgin Islands were withheld for military reasons.

CHARLES F. REID.

VISUAL AIDS. See EDUCATION; EDUCATION, U.S. OFFICE OF.

VITAL STATISTICS. According to tabulations made by the U.S. Bureau of Census, there were 2,808,996 births and 1,385,187 deaths registered in the United States for the year 1942. These figures represent an increase of 295,569, or 11.8 per cent, in the number of births, and a decrease of 12,455, or 0.9 per cent, in the number of deaths as compared with 1941. The increase in the number of births has produced a corresponding increase in the birth rate from 18.9 (1941) per 1,000 population to 21.0, highest recorded since 1925. Since 1933 birth rates have been increasing, being particularly marked in recent years, and according to provisional figures for the first 10 months of 1943, they have continued to climb. Every State in the Union except New Mexico reflected the upward trend in 1942 by showing an increase in the birth rate. The largest reported percentage increase was 25.9 per cent for Connecticut, and the lowest was 0.8 per cent for South Carolina. Highest birth rates are: Utah 27.4, New Mexico 26.7, Mississippi 25.4, North Carolina 25.2, and both Alabama and South Carolina 24.2. Lowest birth rates are: District of Columbia 17.5, Missouri 18.6, New York 18.9, Massachusetts, Nebraska, and New Hampshire 19.0, Rhode Island and New Jersey 19.1, and Florida 19.2.

The mobilization of manpower for war activities in 1941 and 1942 created potential health hazards unrivaled in the history of the United States. See PUBLIC HEALTH SERVICE. However, the death rate continued its downward course in 1941 and 1942, declining from 10.7 per 1,000 population in 1940 to 10.5 in 1941, and to 10.4 in 1942, the lowest ever recorded for the United States. The death rates ranged from 8.7 per 1,000 population in the West South Central States to 11.5 in the New England States.

The 10 leading causes of death in 1942 accounted for about 74 per cent of the deaths from all causes. The largest reduction was recorded for motor-vehicle accidents (declining 29.6 per cent compared with 1941), although substantial decreases were shown in pneumonia and influenza, 12.8 per cent. (See ACCIDENTS.)

The infant mortality rate for 1942 was 40.4 per 1,000 live births and was 10.8 per cent below the

rate of 45.3 in 1941. The rate by States ranged from 29.2 per 1,000 live births in Connecticut to 97.9 in New Mexico. In general, the highest rates were recorded for residents of the Southern and

the Mountain States. (See CHILDREN'S BUREAU.)

The accompanying tables show (1) deaths from selected causes in the United States in 1942, together with the death rate, and (2) a report on

TABLE 1—NUMBER OF DEATHS AND DEATH RATES (NUMBER PER 100,000 POPULATION) FOR SELECTED CAUSES: UNITED STATES, 1942

<i>Cause of death</i>	<i>Number</i>	<i>Rate</i>	<i>Cause of death</i>	<i>Number</i>	<i>Rate</i>
All causes.....	1,385,187	1,035.5	Diseases of the heart.....	394,915	295.2
Typhoid and paratyphoid fever.....	750	0.6	Chronic rheumatic diseases of the heart.....	25,296	18.9
Cerebrospinal (meningococcus) meningitis.....	981	0.7	Diseases of the coronary arteries and angina pectoris.....	113,636	84.9
Scarlet fever.....	447	0.3	Diseases of the heart (other forms).....	255,983	191.4
Whooping cough.....	2,536	1.9	Pneumonia (all forms) and influenza.....	74,532	55.7
Diphtheria.....	1,273	1.0	Bronchopneumonia.....	30,636	22.9
Tuberculosis (total).....	57,690	43.1	Lobar pneumonia.....	27,469	20.5
Tuberculosis of the respiratory system.....	52,980	39.6	Pneumonia (unspecified).....	5,525	4.1
Tuberculosis (other forms).....	4,710	3.5	Influenza.....	10,902	8.1
Dysentery.....	1,877	1.4	Ulcer of stomach or duodenum.....	9,259	6.9
Malaria.....	861	0.6	Diarrhea, enteritis, etc.....	11,774	8.8
Syphilis (all forms).....	16,345	12.2	Appendicitis.....	8,368	6.3
Measles.....	1,302	1.0	Hernia and intestinal obstruction.....	11,483	8.6
Poliomylitis and poliomyelitis (acute).....	561	0.4	Cirrhosis of the liver.....	12,533	9.4
Cancer and other malignant tumors.....	163,400	122.1	Biliary calculi, etc.....	6,882	5.1
Cancer of the digestive organs and peritoneum.....	74,785	55.9	Nephritis.....	96,907	72.4
Cancer of the female genital organs.....	21,031	15.7	Diseases of the prostate.....	7,995	6.0
Cancer of the breast.....	15,954	11.9	Diseases of pregnancy, childbirth, and the puerperium.....	7,267	5.4
Cancer (other sites).....	51,630	38.6	Puerperal septicemia.....	2,808	2.1
Acute rheumatic fever.....	1,527	1.1	Puerperal toxemias.....	1,866	1.4
Diabetes mellitus.....	33,971	25.4	Other puerperal causes.....	2,593	1.9
Exophthalmic goiter.....	2,934	2.2	Congenital malformations.....	15,867	11.9
Pellagra (except alcoholic).....	1,513	1.1	Premature birth.....	34,504	25.8
Alcoholism (ethylishm).....	2,541	1.9	Suicide.....	16,117	12.0
Intracranial lesions of vascular origin.....	120,652	90.2	Homicide.....	7,743	5.8
Other diseases of the nervous system, etc.....	14,783	11.1	Motor-vehicle accidents.....	28,309	21.2
Diseases of the ear, nose, and throat.....	5,024	3.8	Other accidents.....	67,580	50.5
			All other causes.....	142,164	106.3

TABLE 2—BIRTHS, DEATHS, INFANT DEATHS, MOTOR-VEHICLE ACCIDENT DEATHS, AND TOTAL ACCIDENT DEATHS, BY STATES, 1942

<i>Area</i>	<i>Total Births</i>	<i>Birth Rate^a</i>	<i>Total Deaths</i>	<i>Death Rate^a</i>	<i>Infant Deaths^b</i>	<i>Infant Death Rate^c</i>	<i>Motor-Vehicle Deaths</i>	<i>Motor-Vehicle Death Rate^d</i>	<i>Accident Total Deaths</i>	<i>Accident Death Rate^d</i>
United States.....	2,808,996	21.0	1,385,187	10.4	113,492	40.4	28,309	21.2	95,889	71.7
Alabama.....	71,136	24.2	26,084	8.9	3,561	50.1	530	18.0	1,991	67.7
Arizona.....	12,664	23.0	5,586	10.2	1,014	80.1	185	33.8	555	100.9
Arkansas.....	42,680	21.5	15,764	8.0	1,694	39.7	301	15.2	1,158	58.5
California.....	154,667	20.1	84,851	11.0	5,385	34.8	2,579	33.6	6,526	85.0
Colorado.....	23,666	21.2	12,532	11.3	1,172	49.7	276	24.9	1,015	91.4
Connecticut.....	37,264	20.9	18,456	10.3	1,088	29.2	291	16.3	1,072	60.1
Delaware.....	5,657	20.3	3,331	11.9	266	47.0	65	23.3	247	88.5
District of Columbia.....	15,179	17.5	8,417	9.7	771	50.8	117	13.5	506	58.5
Florida.....	40,901	19.2	21,207	9.9	1,953	47.7	531	24.9	1,861	87.3
Georgia.....	72,491	22.5	29,083	9.0	3,571	49.3	696	21.6	2,134	66.4
Idaho.....	11,454	23.9	4,648	9.7	415	36.2	103	21.5	455	95.1
Illinois.....	156,232	19.5	87,777	11.0	5,170	33.1	1,713	21.4	5,393	67.3
Indiana.....	73,706	21.1	39,308	11.3	2,701	36.6	959	27.5	2,871	82.3
Iowa.....	48,454	20.0	25,001	10.3	1,623	33.5	447	18.4	1,706	70.3
Kansas.....	33,320	19.4	13,149	10.4	1,205	35.5	361	20.6	1,343	76.6
Kentucky.....	66,267	23.8	28,279	10.1	3,209	48.4	565	20.3	2,112	75.7
Louisiana.....	58,063	22.8	23,010	9.0	2,802	48.2	457	17.9	1,668	65.4
Maine.....	17,719	21.4	10,446	12.6	816	46.1	164	19.8	690	83.3
Maryland.....	44,237	22.1	22,168	11.1	1,941	43.9	437	21.9	1,417	70.9
Massachusetts.....	82,773	19.0	51,036	11.7	2,651	32.0	573	13.3	3,163	72.7
Michigan.....	123,888	22.4	52,827	9.6	4,608	37.2	1,409	25.5	3,746	67.7
Minnesota.....	58,770	22.1	25,851	9.7	1,739	29.6	479	18.0	1,811	68.0
Mississippi.....	56,667	25.4	20,794	9.3	2,680	47.3	399	17.9	1,418	63.7
Missouri.....	70,711	18.6	41,888	11.0	2,761	39.0	755	19.9	2,683	70.6
Montana.....	11,735	22.8	5,516	10.7	395	33.7	105	20.4	468	90.9
Nebraska.....	23,676	19.0	12,359	9.9	791	33.4	219	17.6	888	71.4
Nevada.....	2,782	20.5	1,634	12.0	159	57.2	74	54.4	201	147.8
New Hampshire.....	9,173	19.0	5,662	11.7	329	35.9	57	11.8	319	66.1
New Jersey.....	81,709	19.1	46,716	10.9	2,542	31.1	783	18.3	2,705	63.2
New Mexico.....	14,129	26.7	5,203	9.8	1,383	97.9	129	24.4	417	78.8
New York.....	244,802	18.9	149,820	11.5	7,814	31.9	2,225	17.2	8,945	64.3
North Carolina.....	89,854	25.2	29,414	8.3	4,342	48.3	827	23.2	2,172	61.0
North Dakota.....	13,357	22.8	4,818	8.2	488	36.5	99	16.9	350	59.9
Ohio.....	144,327	20.8	78,000	11.2	5,345	37.0	1,840	26.5	5,638	81.1
Oklahoma.....	46,008	20.8	19,324	8.7	1,906	41.4	410	18.5	1,519	68.6
Oregon.....	22,518	20.5	12,865	11.7	687	30.5	300	27.4	1,207	110.1
Pennsylvania.....	197,177	20.3	110,174	11.3	7,527	38.2	1,922	19.8	6,997	71.9
Rhode Island.....	14,182	19.1	8,166	11.0	560	39.5	78	10.5	393	53.0
South Carolina.....	48,835	24.2	18,306	9.1	2,866	58.7	393	19.5	1,810	64.9
South Dakota.....	12,424	21.2	5,432	9.3	474	38.2	88	15.0	394	67.2
Tennessee.....	65,147	22.1	27,017	9.2	3,020	46.4	527	17.9	1,716	58.3
Texas.....	144,742	21.6	59,315	8.8	7,760	53.6	1,447	21.6	4,790	71.5
Utah.....	15,822	27.4	4,849	8.4	522	33.0	155	26.9	487	84.4
Vermont.....	7,175	21.0	4,250	12.4	299	41.7	49	14.3	227	66.4
Virginia.....	67,950	22.4	29,197	9.6	3,565	52.5	702	23.1	2,173	71.6
Washington.....	39,007	20.7	20,552	10.9	1,292	33.1	479	25.4	1,692	89.7
West Virginia.....	43,922	23.9	16,975	9.2	2,329	53.0	354	19.2	1,650	89.6
Wisconsin.....	63,982	20.5	31,004	9.9	2,050	32.0	590	18.9	2,042	65.4
Wyoming.....	5,567	22.2	2,126	8.5	251	45.1	59	23.5	248	98.8

^a Per 1,000 estimated population. ^b Under one year of age. ^c Per 1,000 live births. ^d Per 100,000 estimated population.

total figures and rates for births, deaths, infant deaths, motor-vehicle accidents, and accidental fatalities by States, from tables of the U.S. Bureau of Census. Compare medical topics.

VITAMINS. See **CHEMICAL INDUSTRY**; **FOOD INDUSTRY**; **PSYCHOLOGY** under *Sensation*; **PUBLIC HEALTH SERVICE**.

VOCATIONAL REHABILITATION, Office of. An agency of the U.S. Government established July 6, 1943, as a constituent organization within the Federal Security Agency to administer the expanded program of rehabilitation services authorized by the 1943 amendments to the Vocational Rehabilitation Act of 1920 which was under the administration of the Office of Education.

The Vocational Rehabilitation Amendments of 1943, approved by the President on July 6, 1943, provide the necessary frame work within which a peacetime as well as a wartime program of rehabilitation will be administered. The scope of services available to disabled persons now and after the war has been broadened to include any services necessary to render them capable of engaging in remunerative employment or to render them more advantageously employable. These include surgical and medical care, hospitalization, therapeutic treatment, artificial appliances, vocational guidance and training, maintenance during training, and placement in employment. In contrast, the Vocational Rehabilitation Act of 1920, under which authorization the rehabilitation program has operated during the last 23 years, limited the use of Federal funds to training and furnishing of prosthetic appliances.

Other changes made by the new Amendments concern the groups of disabled individuals to be served and the methods of financing this Federal-State program. Mentally as well as physically disabled individuals are now eligible for rehabilitation. Specific provision has been made for the rehabilitation of the blind and war disabled civilians, the latter of whom are defined to include members of the citizens defense corps, aircraft warning service, civil air patrol, and the merchant marine.

The fiscal provisions have been liberalized, with the old limitation of 3½ million dollars appropriated annually by the Federal Government for matching purposes having been removed. Grants to the States may now be based on actual requirements and the amount of State funds available for matching, rather than on the basis of population as provided by the Act of 1920.

Under the Amendments of 1943, the Federal Government will assume the entire cost of administration of State programs in contrast to the previous requirements of matching on a 50-50 basis. It will assume one half of the cost of medical examinations, surgical and therapeutic treatment, hospitalization, prosthetic appliances, transportation, occupational tools and licenses, rehabilitation, training, and maintenance. The entire cost of these services will be assumed by the Federal Government in the case of war disabled civilians.

Sole responsibility for the administration, supervision, and control of this program rests with the State Boards of Vocational Education. Where there is a State Commission or other Agency authorized to provide rehabilitation services to the blind, that Commission or Agency will administer the part of the rehabilitation program pertaining to this group.

Responsibility for certification of Federal funds and establishing standards rests with the Federal

Security Agency. Within this Agency, an Office of Vocational Rehabilitation has been created to discharge these Federal responsibilities. The basic condition to the certification of Federal funds is a State plan of vocational rehabilitation approved as meeting Federal requirements under the Act.

MICHAEL J. SHORTLEY.

VOCATIONAL TRAINING. See **EDUCATION, U.S. OFFICE OF**; **MOTOR VEHICLES**; **PSYCHOLOGY** under *Industrial Psychology*; **SHIPPING** under *Labor and Training*. Compare **TRAINING FILMS**. For **Vocational Division**, see **EDUCATION, U.S. OFFICE OF**.

VOLCANO, Paricutin or "Rock Oven." See **MEXICO** under *History*.

VOLUNTEER PORT SECURITY FORCES. See **COAST GUARD**.

VON CLEMM CASE. See **LAW** under *War Decisions*.

VOTING. See **STATE LEGISLATION** under *War and Postwar*; **UNITED STATES** under *Politics* (especially for soldier vote). For votes cast, see **ELECTIONS**.

VOUGHT CORSAIR and **KINGFISHER.** See **AERONAUTICS** under *Types*.

VT LOANS. See **BANKS AND BANKING**.

WACO CG4A. See **AERONAUTICS** under *Gliders*.

WACS (formerly WAACS). See **SELECTIVE SERVICE SYSTEM**.

WAFS. Women's Auxiliary Ferrying Squadron. See **AERONAUTICS** under *Air Transport Command*.

WAGE AND HOUR AND PUBLIC CONTRACTS DIVISIONS. These Divisions of the U.S. Department of Labor administer the Fair Labor Standards Act of 1938, commonly called the Federal Wage and Hour Law, and the Walsh-Healey Public Contracts Act. Thirteen directors head the regional offices and North Carolina has a special cooperative agreement with the Divisions to enforce the Acts. By the end of the first quarter of the 1943 fiscal year, the integration of the two Divisions had been completed and the plan of joint activities was in operation in the field, eliminating duplicate inspections.

During the fiscal year ended June 30, 1943, 61,650 establishments were inspected under both Acts. Of these, 61,356 were inspected under the Fair Labor Standards Act with 56,994 found to be covered; of these covered establishments violations were found in nearly three-fourths and failure to pay the minimum wage or overtime in almost half. Nearly 8,000 inspections were made under the Public Contracts Act in the period following consolidation, all but 300 of which were concurrent with the Wage-Hour inspections. In about one-third of these violations were found and in almost one-fifth of them, violations of the minimum wage or overtime provisions. During the fiscal year, restitution of approximately \$16,800,000 in wages illegally withheld under both Acts had been agreed upon by employers or ordered paid to almost 390,000 employees in about 20,000 establishments.

The Wage and Hour and Public Contracts staff is charged further with the inspection of safety and health devices in those plants holding public contracts.

The Divisions had just been merged when they assumed the additional job of assisting the National War Labor Board (q.v.) in the wage stabilization program. The more than 100 field offices and 1,000 inspectors of the Divisions undertook the servicing of employers and employees in every section of the country, empowered to issue jurisdictional rulings as to whether or not proposed changes in pay schedules required the prior approval of the Board, ac-

cording to official releases and orders of the Board itself. By the end of June, 1943, the Divisions had acted on over 100,000 requests for rulings and handled about 900,000 informal inquiries relating to wage stabilization. In 65,000 applications the applicants were assisted in filling out the required forms for the War Labor Board which were then forwarded to the Board for action. Special inspections made by Wage and Hour and Public Contracts inspectors to determine whether or not employers had complied with the Executive Order of the President indicated that a large percentage of violations was unintentional, and education in requirements of the Order and the regulations of the War Labor Board has therefore become an integral part of the inspection program.

Throughout the year the Divisions gave assistance to various other war agencies, inspecting, for example, 28,000 establishments for the War Production Board under its Production Requirements Plan.

Proceedings for injunctions against future violations of the wage or hours provisions of the Fair Labor Standards Act were instituted in 487 cases, while the criminal penalties which the statute provides for cases of wilful violations were invoked in 51 cases during the year. During its 1942-43 term the Supreme Court heard argument and rendered decisions in seven cases involving the Fair Labor Standards Act and denied certiorari in nine others.

Significant was the decision in the *Walling v. Jacksonville Paper Co.* and *Higgins v. Carr Bros. Co.* cases where the Supreme Court held that goods ordered pursuant to preexisting contracts or understandings between the wholesaler and his customers remain "in commerce" until they reach the customer, and that the employees of the wholesaler who are engaged in the ordering and receiving of extrastate goods, as well as those engaged in the local distribution of such goods brought in pursuant to prior contracts or understandings, are entitled to the benefits of the Act. In two other cases the Court upheld the Division's interpretations in applying the Act respectively to employees maintaining and collecting tolls on a toll road and a drawbridge which formed a part of a highway used in interstate commerce (*Overstreet v. No. Shore Corp.*), and to employees of an independent contractor who drilled oil wells owned by oil companies, the output of which the contractor knew was going to be shipped in interstate commerce (*Warren-Bradshaw Drilling Co. v. Hall*). In the case of *McLeod v. Threlkeld* a five to four majority of the Court held that the Act did not embrace a cook employed by a commissary company on a railroad camp car whose duties included the preparation and serving of meals to members of a railroad's maintenance crew.

Following the procedure required by Sections 5 and 8 of the Fair Labor Standards Act for establishing minimum wages in specific industries, sixteen industry committees were convened by the Administrator during the year, each of which recommended a 40-cent minimum for its industry or group of industries. By the close of the year the Administrator had issued wage orders establishing the recommended minima for seven of these industries and seven others from the previous year; action had not yet been taken on the recommendations of the remaining nine industry committees. A significant factor in effectuating the work of the industry committees was the inclusion of many related industries simultaneously under a single committee. Thus, Committee Number 53 for the metal, plastics, machinery, instrument, and allied indus-

tries covered products classified in over 150 Census industries.

The industries affected by committee recommendations during the year employ more than 10 million covered workers, of whom approximately 370,000 would be directly affected by the issuance of wage orders requiring the payment of a minimum wage of 40 cents an hour. It is estimated that in one-third of the industries, between one-fifth and one-half of the workers were earning less than the recommended minimum.

Under the terms of the Fair Labor Standards Act, the minimum of 40 cents will apply to all covered workers in October, 1945. By October, 1943, however, industry committees had met and recommended a 40-cent minimum wage for all the industries on the mainland of the United States subject to the Act. Thus, under the Congressional direction to proceed as rapidly as possible with industry committee action, it is anticipated that the universal 40-cent minimum for the 21,000,000 workers covered under the Fair Labor Standards Act will have been reached nearly two years in advance of the Oct. 24, 1945, deadline set in the statute.

L. METCALFE WALLING.

WAGES, WAGE STABILIZATION. See LABOR CONDITIONS under *Wages*.

WALES. See GREAT BRITAIN under *Area and Population*.

WALLACE-JONES CONTROVERSY. See UNITED STATES under *Production*.

WAR AREAS, Conditions in. See FEDERAL SECURITY AGENCY; also, CONGESTED PRODUCTION AREAS, COMMITTEE FOR; JUVENILE DELINQUENCY; NATIONAL HOUSING AGENCY; PUBLIC HEALTH SERVICE; SANITATION.

WAR BONDS AND STAMPS. For statistics on sales, see PUBLIC FINANCE. See also-BANKS AND BANKING; CIVILIAN DEFENSE, OFFICE OF; FINANCIAL REVIEW; NEWSPAPERS; POST OFFICE; articles on organizations and SOCIETIES.

WAR CASUALTIES. See WORLD WAR under *Casualties*. For *Treatment of War Casualties*, see MEDICINE; PSYCHIATRY.

WAR COMMUNICATIONS, Board of (BWC). The Board of War Communications (formerly the Defense Communications Board) was created by Executive Order on Sept. 24, 1940, to coordinate plans for the most efficient use of the country's radio, wire, and cable communications during the national emergency. After the United States entered the war, the President further empowered the BWC to use, control, or close down communications facilities and to set up preferences or priorities in the handling of essential war communications.

James Lawrence Fly, Chairman of the Federal Communications Commission, is also Chairman of the Board. Other members are Maj. Gen. Harry C. Ingles, Chief Signal Officer of the Army; Rear Adm. Joseph R. Redman, Director of Naval Communications; Hon. Adolf A. Berle, Jr., Assistant Secretary of State; and Hon. Herbert E. Gaston, Assistant Secretary of the Treasury, who is also BWC Secretary. Capt. E. M. Webster, Chief of Communications, U.S. Coast Guard, is Assistant Secretary of the BWC.

The Board has no paid personnel, appropriations, or funds. It operates through a Coordinating Committee, headed by FCC Chief Engineer E. K.

Jett, and a Law Committee staffed by personnel from the five agencies represented on the Board. In addition, a number of committees made up of industry, government, and labor representatives, specialists in all fields of communications, serve the Board in an advisory capacity.

During the 1943 fiscal year, the BWC issued 18 orders designed to strengthen and speed essential wartime communications. Perhaps the most important were Orders 20, 26, and 27, establishing priority systems for telephone, teletypewriter, and telegraph messages important to the war effort. Faced with an unprecedented volume of telephone traffic, coupled with shortages of facilities and personnel, the BWC in Order 20, Oct. 8, 1942, set three categories of priorities for all telephone toll calls important to the war effort or public safety. Priority handling (Order 26) for urgent teletypewriter exchange (TWX) messages and for urgent telegrams (Order 27) essential to the prosecution of the war was instituted in January, 1943.

Effective July, 1942, the Board (Order 12) authorized the FCC to remove and impound all amateur and unlicensed radio equipment in Puerto Rico and the Virgin Islands. In Order 13 licensees of domestic broadcast stations were asked to report on their stocks of transmitting tubes. Authority to use, control, or close wire and radio facilities in Alaska and Puerto Rico was delegated to the War Department (Orders 14 and 24). And in the fall of 1942 the Board prohibited substantially all private radio telephone calls outside the Western Hemisphere unless approved by an agency of the U.S. Government.

In line with the policy of government control of international broadcasting facilities during the war, the Board ordered closure of short-wave radio stations WRUL, WRUS, and WRUW and authorized their use by the Office of War Information.

To implement efficient handling of a greatly accelerated volume of telegraph traffic, the Board in December, 1942, set forth "speed of service" objectives and forbade acceptance by the telegraph carriers of congratulatory, greeting, and other types of nonessential telegrams. Carriers were also forbidden to use personnel or facilities in rendering errand or other nontelegraphic services to the public. A further report to the Board on the speed and adequacy of wartime telegraph service was made by the Federal Communications Commission (q.v.) in August, 1943.

The need for flexible, efficient systems of radio-telegraph communications from this country to theaters of Allied military operations in North Africa and elsewhere has engaged considerable attention of the Board. BWC Order 29, adopted in May, 1943, made it necessary for American international wire or radio communications carriers to file written notice with the Board for its approval before opening negotiations with any foreign administration regarding the establishment of communications circuits from this country.

WAR CONTRACTS, Cancellation or Renegotiation of. See BUSINESS REVIEW; FINANCIAL REVIEW; JOINT PRICE ADJUSTMENT BOARD; MOTOR VEHICLES; PUBLIC FINANCE; TAXATION.

WAR COVERAGE AND PRESENTATION. For books, see LITERATURE, AMERICAN AND BRITISH; FRENCH LITERATURE; PSYCHIATRY. For reporting, see MAGAZINES, NEWSPAPERS, RADIO PROGRAMS. See also ART; MOTION PICTURES; NEWSPAPERS; PHOTOGRAPHY.

WAR CRIMES AND WAR CRIMINALS. See LAW under *War Decisions*; UNITED NATIONS; BELGIUM, CZECHOSLOVAKIA, NORWAY, POLAND, and the other German-occupied countries, and UNION OF SOVIET SOCIALIST REPUBLICS under *History*.

WAR DAMAGES. See GERMANY, GREAT BRITAIN, ITALY, UNION OF SOVIET SOCIALIST REPUBLICS, and other belligerent countries under *History*; also, ART under *Salvage and Restoration*. For *War Damage Corporation*, see INSURANCE; RECONSTRUCTION FINANCE CORPORATION.

WAR DEBT PAYMENTS. See FINLAND under *History*.

WAR DECISIONS. See LAW under *War Decisions*.

WAR DEPARTMENT, U.S. See MILITARY PROGRESS and the topics there listed.

WAR DEPARTMENT DECORATIONS. A list of decorations awarded by the U.S. War Department follows, in order of precedence, except that the Oak-Leaf Cluster is issued in lieu of an additional medal, and its precedence is that of the medal it represents:

1. Medal of Honor
2. Distinguished-Service Cross
3. Distinguished-Service Medal
4. Legion of Merit
5. Silver Star
6. Distinguished-Flying Cross
7. Soldier's Medal
8. Purple Heart
9. Air Medal
10. Medal for Merit (State, War, and Navy Departments)
11. Oak-Leaf Cluster
12. Good Conduct Medal and Clasp

Not more than one of the several decorations authorized by Federal law may be awarded for the same act of heroism or achievement.

The recipient of a Medal of Honor will, whenever practicable, be ordered to Washington and the presentation made by the President. When this is impracticable, the Secretary of War or an officer designated by him will act as the personal representative of the President for the presentation of the medal.

Awards of decorations are made by the War Department or by designated commanders, acting for the President. In any case where the commander is not authorized to make an award, recommendations will be forwarded to the War Department.

The Medal of Honor is awarded in the name of the Congress to each person who, while an *officer, noncommissioned officer, or private of the Army*, in action involving actual conflict with an enemy, distinguishes himself conspicuously by gallantry and intrepidity at the risk of his life above and beyond the call of duty.

The Distinguished-Service Cross is awarded to persons who, while serving *in any capacity with the Army*, distinguish themselves by extraordinary heroism in connection with military operations against an armed enemy, involving a risk of life so extraordinary as to set him apart from his comrades.

The Distinguished-Service Medal is awarded to persons who, while serving *in any capacity with the Army*, distinguished themselves by exceptionally meritorious service to the Government in a duty of great responsibility (one which has contributed in high degree to the success of a major command, installation, or project).

The Legion of Merit, without reference to degree, is awarded to members of the armed forces of the United States and of the Government of the Philippines who distinguish themselves by excep-

tionally meritorious conduct in the performance of outstanding services. It is particularly desired that recognition be given personnel in the enlisted and lower commissioned grades whose services meet the standards prescribed. The Legion of Merit, in four degrees, is awarded to *personnel of the armed forces* of friendly foreign nations who distinguish themselves by exceptionally meritorious conduct in the performance of outstanding services. The degrees are: Chief Commander, Commander, Officer, and Legionnaire.

The Silver Star is awarded to persons who, while serving in any capacity with the Army, distinguish themselves by gallantry in action not warranting the award of a Medal of Honor or Distinguished-Service Cross.

The Distinguished-Flying Cross is awarded to *members of military, naval, and air forces* who, while serving in any capacity with the Army Air Forces, distinguish themselves by heroism or extraordinary achievement while participating in aerial flight.

The Soldier's Medal is awarded to *members of military, naval, or air forces*, who, while serving in any capacity with the Army, distinguish themselves by heroism not involving actual conflict with an enemy.

The Purple Heart, established by General George Washington at Newburgh, 7 August 1782, during the War of the Revolution and revived out of respect to his memory and military achievements by War Department General Orders, No. 3, 22 February 1932, is awarded to members of the armed forces of the United States and to civilians who are citizens of the United States serving with the Army, who are wounded in action against an enemy of the United States, or as a direct result of an act of such enemy, provided such wound necessitates treatment by a medical officer. One award (the Purple Heart for the first wound, an Oak-Leaf Cluster thereafter) is authorized for each such wound, except that only one award is authorized for two or more wounds received contemporaneously.

The Air Medal is awarded to persons who, while serving in any capacity in or with the Army, distinguish themselves by meritorious achievement while participating in an aerial flight. The required achievement to warrant award of the Air Medal is less than that for the Distinguished Flying Cross, but must be accomplished with distinction above that normally expected.

None of the above decorations will be issued more than once to any one person, but for each succeeding deed, act, or achievement sufficient to justify an award, a bronze Oak-Leaf Cluster will be awarded in lieu thereof. Silver Oak-Leaf Clusters are authorized for wear on the appropriate decoration in lieu of bronze Oak-Leaf Clusters in the ratio of one to five.

In case an individual who distinguishes himself shall have died before the making of the award to which he may be entitled, the award may nevertheless be made and the decoration or other device presented to the first of the following representatives as shown by the records of the War Department: Widow (provided she has not remarried), eldest son, eldest daughter, father, mother, eldest brother, eldest sister, eldest grandchild.

The Medal for Merit is awarded to such *civilians* of the nations prosecuting the war under the joint declaration of the United Nations and of other friendly foreign nations as have, since the proclamation of an emergency by the President on 8 September 1939, distinguished themselves by exception-

ally meritorious conduct in the performance of outstanding services. The Medal of Honor, the Legion of Merit, the Distinguished-Flying Cross, and the Soldiers Medal will not be awarded to civilians. The Purple Heart may be awarded to accredited civilians (for example, war correspondents, Red Cross personnel, etc.) who are citizens of the United States, and to officers and members of crews of ships of the United States Merchant Marine serving within their commands. The Distinguished-Service Cross and the Silver Star may be awarded by the commanding generals of United States Army forces in theaters of operations, to officers and members of crews of ships of the United States Merchant Marine, serving under their jurisdiction. This authority will not be delegated.

WAR EMERGENCY PIPE LINES, INC. See **AQUEDUCTS**.
WAR EMERGENCY RADIO SERVICE. See **CIVILIAN DEFENSE, OFFICE OF**.

WAR EXPENDITURES AND FINANCING. See **PUBLIC FINANCE**; **UNITED STATES** under *Congress* and the various belligerent countries under *Finance*; also, **LEND-LEASE PROGRAM**; **NAVAL PROGRESS**; **RECONSTRUCTION FINANCE CORPORATION**; **WAR BONDS**. For war relief expenditures, see **WAR RELIEF**. For loans for war production, see **BANKS AND BANKING**.

WAR FOOD ADMINISTRATION (WFA). The function of the War Food Administration and its responsibility to the nation is to assist in achieving the largest supplies of those foods and fibers that are most needed to meet the war emergency; to bring about the most efficient processing of that food; and finally to enable the most equitable distribution among the various claimants. This three-fold responsibility naturally extends into many ramifications.

As for production, the War Food Administration seeks to assist the farmer to meet the many production problems which are inherent in wartime farming. It is recognized that farmers need an adequate labor supply, necessary machinery, equipment, fuel, fertilizer, and other supplies, and that he also needed adequate price supports to enable him to meet his costs of production.

The farm population in 1943 was the lowest in nearly 20 years, about four million less than in 1918. About a million farm workers had gone to the armed services. The War Food Administration's 1943 farm labor program called for a draft deferment policy to keep skilled workers on farms, to return certain skilled workers back to the farm, to assist in recruiting and placing some 3½ million U.S. Crop Corps workers, to import foreign workers from Mexico, Jamaica, and Bahama, to transport and handle workers from some areas to other areas during seasons of peak labor demands, to stabilize farm wages, and to cooperate with the State and county agencies in encouraging the best use of available townspeople, elderly people, women, students, and children.

The farm families and their regular farm labor were chiefly responsible for the fact that the largest production of food and fiber ever produced in the United States was planted, tended and harvested without any significant losses that could be attributed to labor shortage. (See **AGRICULTURE**.) This program is being continued in 1944. The output of food per farm worker in 1943 was 61 per cent higher than in 1918.

The War Food Administration presented to WPB agriculture's needs for farm machinery and succeeded in increasing the allocations so that the

total output of farm machinery for the year ending July, 1944, is expected to be nearly as great as in 1940. During the year certain types of farm machinery were apportioned according to relative needs to various parts of the country, and allocated locally by county farmer committees. By the end of the year the 95 types of rationed farm machinery were reduced to 31 types considered most essential to attain food goals. Fertilizers were supplied above prewar levels.

A price support program for the principal and most needed commodities was worked out so that the price pattern would encourage the desired production of the various crops, and would give the necessary assurance to farmers so that they could plan in advance. These price supports were related to production goals.

The result of these efforts, generally good growing conditions, and the farmer's vigilant efforts, was the largest food production in 1943 of any year in history. Total crop production was somewhat below the previous all time record of 1942, but it was slightly more than made up by the increased meat production during the year. Yields averaged slightly lower on a larger acreage.

During the year production goals for 1944 were established after consultation in all the States with representatives of farm groups from all the counties. These production goals call for a larger acreage in 1944 and a larger total food production, particularly of those crops most needed because of the war demands.

The Office of Distribution of the WFA facilitated a substantial increase in many food processing plants and development of new processing methods arising from war needs. The food processing industry handled 49 per cent more meat, 63 per cent more chickens, 50 per cent more egg products, 14 per cent more dairy products, 29 per cent more fats and oils, and 63 per cent more canned vegetables than the average prewar year. WFA undertook to help protect the requirements of food processors for the necessary labor, equipment, materials, and transportation to enable these results. (See also *FOOD INDUSTRY*.)

Food distribution programs were designed to secure equitable distribution of scarce foods and to divert foods into the proper channels. These programs included food allocations, food orders, coordinated procurement of food, food conservation, industrial feeding and other programs.

Allocation is the cornerstone of the distribution program. It enables the middle course between the inability to meet the full wants of the American civilians and the full wants of our allies and armed forces. Because of unprecedented civilian purchasing power, the American civilian was able to demand and pay for record amounts of food, greatly above his normal peacetime diet level. Allocation keeps this demand under some control, thus protecting supplies for our armed forces and allies.

WFA worked closely with the armed services in coordinating all the government food buying. Allocation, in cooperation with other agencies, provided 75 per cent of the nation's food production for civilians, the rest going for direct war services—13 per cent to U.S. military services and 12 per cent to U.S. allies and other friendly nations. The diet level of the civilian was maintained at a high level; the total food consumption per capita in 1943 was only slightly below the record levels of 1941 and 1942 and above that of the five year prewar period.

In addition, the War Food Administration, cooperating with OWI and OPA, conducted a nation-

wide educational program in cooperation with all available publicity media, including newspapers, magazines, radio, and motion pictures. This program gave food facts to the citizens under the slogan: "Food Fights for Freedom—Produce and Conserve, Share and Play Square," and appealed to citizens to take individual action to bring about more effective management of food production and use. See *AGRICULTURE* under *Selective Crop Expansion* and *Wartime Price Control*; *AGRICULTURE*, U.S. DEPARTMENT OF; *FOREIGN ECONOMIC ADMINISTRATION*; *UNITED STATES* under *Production*.
FRANCIS A. FLOOD.

WAR FUND. See *NATIONAL WAR FUND*.

WAR GUILT CONTROVERSY. See *GREAT BRITAIN* under *History*.

WAR HOUSING CENTERS. See *NATIONAL HOUSING AGENCY*.

WAR INFORMATION, Office of (OWI). The Office of War Information, created by Executive Order of the President on June 13, 1942, is authorized "to formulate and carry out . . . information programs designed to facilitate the development of an informed and intelligent understanding at home and abroad of the status and progress of the war effort and of the war policies, activities, and aims of the government . . ." On June 18, 1942, President Roosevelt appointed Elmer Davis as Director of OWI.

The activities of the OWI are conducted through two branches, the Overseas Operations Branch, and the Domestic Operations Branch.

The Overseas Operations Branch is charged with planning, developing, and executing all phases of the Federal program of radio, press, publications, and related foreign propaganda activities, bringing information to all countries outside the Western Hemisphere. Propaganda is disseminated in theaters of military operation, or in enemy-occupied countries, the objective being to assist military operations, to confuse and demoralize the enemy by weakening his resistance at home and on the battlefield, and to strengthen the will to resist of people in occupied countries. In allied and neutral countries, including base areas where American troops are stationed, the Office of War Information carries on an information program designed to provide a better understanding of the American war effort and to foster friendliness and good will for the United States. OWI representatives abroad collaborate closely with American diplomatic representatives, and in some instances are attached to the American mission.

The Domestic Operations Branch supplies information to the press, radio, magazines, books, and motion pictures in the United States. In order to prevent confusion in the public mind, the Domestic Operations Branch coordinates official statements of the government, and reviews speeches, radio scripts, motion pictures, press releases, and publications originating in other government agencies when these are concerned with subjects bearing on the war.

See *FEDERAL COMMUNICATIONS COMMISSION*; *MAGAZINES*; *NEWSPAPERS*; *RADIO PROGRAMS*. For *Voice of America*, see *COMMUNICATIONS*.

ELMER DAVIS.

WAR LABOR BOARD (WLB). See *NATIONAL WAR LABOR BOARD*.

WAR LABOR DISPUTES ACT (Connally-Smith). See *LABOR CONDITIONS* under *Federal Labor Legislation*; *NATIONAL WAR LABOR BOARD*.

WAR LEGISLATION. See *SELECTIVE SERVICE SYSTEM; STATE LEGISLATION under War and Postwar Legislation; UNITED STATES under Congress.*

WAR LOANS. See *CANADA under History.* For *United States War Loan Drives*, see under *WAR BONDS.*

WAR MANPOWER COMMISSION (WMC). The War Manpower Commission was established by Executive Order of the President No. 9134, dated Apr. 18, 1942, for the purpose of assuring "the most effective mobilization and utilization of the national manpower in the prosecution of the war." Paul V. McNutt, Federal Security Administrator, was appointed Chairman and membership was composed of representatives of various Departments and government agencies whose activities were directly related to the problems of manpower (see below for data on personnel).

The need for such an authority was imperative. Since the defense program had first been inaugurated in July, 1940, following the fall of France, significant changes had occurred in the size, composition, and distribution of the labor force. In December, 1941, the total labor force was 56,100,000 of whom 2,100,000 were in the armed forces, 6,500,000 in munitions industries, 6,500,000 in essential nonagricultural industries, 8,300,000 in agriculture, 28,900,000 remained in other than essential industries, and 3,800,000 unemployed.

After Pearl Harbor the whole process was enormously accelerated. Conversion of plants and factories to a war footing proceeded rapidly. New plants sprang up. Employers were building up their payrolls to unprecedented levels. Millions of workers were transferring from civilian industry into war jobs. Vast numbers of women were entering the labor market for the first time and thousands of white collar workers were putting on overalls. Along with this there had set in a tremendous migration of workers with whole families traveling hundreds and even thousands of miles to the new war production centers.

To direct the flow of individual workers into jobs where they could best serve the war effort, to arbitrate the competing claims of employers on manpower reserves and to arrange for the recruitment and allocation of the several million more workers who would eventually be needed—all these things posed a problem of considerable proportion.

Of immediate and critical importance was the inadequate supply of skilled labor available. Employers were engaged in extensive pirating practices—hiring needed skilled workers away from other employers by promises of higher pay. The turnover of labor in these categories was causing grave concern.

Another problem was developing which was to prove even more serious. The heavy influx of workers into war production imposed a severe strain on community living conditions. Housing became congested. Bus and streetcar facilities proved insufficient. There were not enough restaurants, laundries, doctors, dentists. Shopping for the simplest items of food, clothing and other family necessities became a problem for the woman working all day. Nor was there adequate provision for the daytime care of the children of working mothers.

In the plants and factories, conditions were equally difficult. There was a lack of sanitary conveniences and restrooms, a lack of proper plant eating facilities, inadequate safety devices, health safeguards. Under the pressure of wartime production, new workers were set at unfamiliar tasks without proper training. Normally efficient management methods sagged and bad scheduling of work

kept many men and women idle for long periods at a time. There was failure to utilize workers at their highest skills or to afford adequate opportunities for upgrading.

As a result, workers in huge numbers were leaving their jobs to seek others in plants and communities where they hoped living and working conditions would be easier. Fatigue and illness figured largely in the growing absentee figures and women especially found it necessary to take time out to do necessary family shopping and to care for sick children.

Furthermore, as a result of this continued drain the hoarding of labor assumed serious proportions, and employers began keeping in reserve large numbers of idle or partly idle workers.

All these factors made for a waste of productive effort and were to be intensified as production pressures increased. They were the main underlying causes of the high rate of labor turnover and absenteeism which became a major and continuing manpower problem.

Before any of these problems could be effectively attacked, a considerable amount of preliminary spadework was necessary. Organization was a first necessity and this had to start from scratch. Personnel for a headquarters staff was gathered together. A National Management-Labor Policy Committee was appointed composed equally of leaders of organized labor and representatives of the employers. The basic policy of "voluntary cooperation of labor and management working with government" was formulated.

For administrative purposes the country was divided into twelve regions and regional offices were set up. These were followed, as rapidly as circumstances permitted, by the establishment of area organizations within the regions. To each of these offices was attached not only a local War Manpower Director but also a local Management-Labor Committee drawn from representatives of both the worker and employer. The avowed purpose was to establish a system of complete decentralization of administration under which necessary decisions could be made and action taken at the local level.

As the War Manpower situation developed it presented itself not as a national problem but a network of intensely local and community plant problems and the inevitable crises which succeeded each other were primarily of this nature. Only from the trial and error methods of these local organizations in meeting their individual crises was it possible to evolve later a basic pattern of operation.

At the beginning, however, most of the activity centered in Washington. Comprehensive studies were made to estimate total manpower requirements for war industry in relation to military, agricultural and civilian needs. The various procurement agencies of the government were directed to supply information as to the relative importance, in respect to the prosecution of the war, of all plants and factories. A list of those activities and occupations most essential to the war effort was drawn up and the U.S. Employment Service directed to give them preference in the recruitment and placement of workers.

To conserve the supply of needed skilled workers, Selective Service was directed to give temporary deferment to workers in essential categories who were necessary to maintain war production schedules. To increase the supply, the efforts of the various government training bureaus were stepped up. Unemployed workers who had been idle for a long time were given intensive refresher courses and workers transferring to war jobs were

taught new skills and methods of work. Employers were assisted in setting up their own plant training programs. At the same time, a vigorous campaign against labor pirating succeeded by "gentleman's agreement" in nearly wiping out this abuse.

Special emphasis was laid upon community living conditions and the WMC worked closely with the Community War Services of the Federal Security Agency and the various other government agencies which were attacking these problems. In many areas, new housing projects were inaugurated, bus service increased, stores were persuaded to stay open one or more nights a week, child-care centers were organized and medical service improved.

Looking forward to an inevitably tightening labor market, extensive campaigns to recruit more women for war jobs were set in motion. Employers were also urged to afford full employment opportunities to older and handicapped workers. The WMC took active steps to put into practice the President's Fair Employment policy which forbade discrimination in the hiring of workers because of race, creed, color, or national origin. At a somewhat later date, standards were established under which youths under eighteen—and school children for part-time work—might be added to the labor force without detriment to their health and welfare.

In September, 1942, a serious labor shortage arose in the nonferrous mining and lumbering industries, following a continued loss of workers to other higher paid jobs and to the draft. An employment stabilization plan by which workers were prohibited from leaving jobs in these industries except for certain valid reasons and other employers were permitted to hire workers recently engaged in these activities only on referral by the USES. Recruiting efforts were less successful and it was finally necessary to furlough for a short time skilled copper miners from the Army.

An even more serious shortage had been developing in agriculture, for much the same reasons, which threatened the nation's food supply. An Employment Stabilization plan was established for the dairy, livestock, and poultry farms and a whole series of measures were taken in cooperation with the Department of Agriculture for other categories of farm labor to arrest the dangerous exodus of workers into war industry. A directive to Selective Service laid down a liberal policy of deferment for essential agricultural workers. Efforts were made to recruit white collar workers for the farms. Some foreign labor from Mexico, Jamaica, and the Bahamas was imported and during the harvest season some farm workers already in the Army were given furloughs to help harvest the crops.

The fear of a short-handed agriculture, however, brought about the Tydings Amendment to the Selective Service Act (Nov. 6, 1942) which made mandatory the deferment of all essential workers engaged in agriculture. Subsequently, responsibility for the recruitment and allocation of manpower in this field was placed upon the War Food Administration (q.v.). After this, WMC activity on the agricultural front was confined chiefly to the recruiting of farm workers for short-term industrial war jobs during the "off" seasons.

In the meantime, certain general problems of administration had become pressing. The need to coordinate more closely the functions of the United States Employment Service and to enlarge its facilities had become apparent and on Sept. 17, 1942, this Service was placed by Executive Order of the President under the supervision and direction of the Chairman of the WMC. Included also, in this

order, was the National Youth Administration, the Apprentice Training Service and the Training Within Industry Service.

Similarly, it was found necessary to relate more closely the demands of the armed services with those of war industry—particularly to protect employers against the loss of their skilled workers either through the draft or by voluntary enlistment. On December 5, by Executive Order, the Selective Service System was made an integral part of the WMC, all voluntary enlistments were banned and the Chairman was given complete authority over the recruiting and hiring of all workers.

Area organization was helped enormously by the first order and in the smaller communities, especially, the local USES became the unit around which area activity revolved. At first, this activity was centered around the primary function of supplying workers to meet the demands of the employers and in allocating workers on the basis of authorized lists of essential activities and occupations. An extensive inter-area and inter-regional clearance system proved an effective method of bringing together hard-to-find skills and hard-to-fill jobs.

Beyond this, a comprehensive method of reporting and forecasting labor trends was instituted. Each area gathered specific information as to probable labor requirements for the succeeding one month, three months and six months. Manning and Replacement Tables were devised by which an employer could keep a constant check upon the number of workers and types of skill he could expect to lose to the draft and arrange a proper schedule of replacements. As developed, these tables provided for the employer not only a complete inventory of present and future job needs but an analysis of skills demanded, the time factor involved in training workers to acquire these skills, a logical schedule for upgrading workers, the degree to which women could replace male workers and other valuable information. For the Area War Manpower Director they provided a factual picture of the local manpower demand as balanced against the local manpower supply. They also set up the storm signals of any approaching labor shortage.

These storm signals were soon being flashed. During 1942, some 4,000,000 men and women had been added to the effective labor force of the country (including the armed forces) and in most areas, despite the heavy inroads made by the draft, there were still plenty of workers to meet the large and increasing demands of war industries. But in certain areas where war production was most heavily concentrated critical shortages began to appear.

In part, these shortages were due to the fact that war contracts and new facilities were being awarded to plants and factories without reference to the amount of labor available within the community. These communities, eager for increased business, sought and obtained more and more new contracts. And as war industry passed through its initial retooling phase, production schedules were stepped up to higher and higher levels. In the meantime, the supply of workers available to meet these increasing schedules was being rapidly exhausted.

Then, too, these shortage areas were those into which the migration of workers had been the heaviest and where community facilities had been the most severely overtaxed. To import more workers was to impose a greater burden on these facilities; for the most part additional workers had to be secured from the ranks of housewives who were outside the normal labor market and by transfer-

ring workers from less essential activities into war jobs.

It was in these areas also that the rate of labor turnover, for reasons noted above, became particularly alarming. The outright loss of productive effort from this cause added to the pressures, as did a serious underutilization of the labor supply in plants and factories which will be discussed later.

Many of the areas affected by these developing shortages had made individual efforts to meet the local situation. Various plans of a widely differing nature had been formulated and put into operation. Some had proved more practicable than others. That of Baltimore, though drawn originally to deal with pirating practices, had enlarged its scope and was dealing successfully with some of these other problems.

In February, a general Policy Statement on Employment Stabilization was drawn up in an effort to codify those regulations and controls which experience had shown to be the most workable. Its primary aim was to reduce turnover and the unnecessary migration of workers and to direct the flow of scarce labor where it was most needed. Gate hiring of workers for designated shortage occupations in essential industries was eliminated by the requirement that all such hiring should be channeled through the USES and certain other recognized placement agencies.

Special emphasis was placed upon the need of organizing community action to improve housing, transportation conditions, etc. which in most areas presented a problem of critical proportions.

This policy statement was not in itself a concrete plan but rather the creation of certain minimum standards upon which local area organizations were to base specific plans when and if such plans were put into operation. Any given area was free to adopt other or more drastic regulations in case the pressure of local problems warranted such action. This included the system of controlled referral, under which workers in certain designated categories and under proper safeguards were required to take those jobs for which their services were most actively needed.

Simultaneously, all areas were classified under the following headings:

Group I—Areas of acute labor shortage. By WPB directive, procurement agencies were enjoined from awarding any new contracts in areas so classified wherever such action was consistent with the required speed of war procurement and unless because of unique facilities it was impossible to award them elsewhere. [It was not, however, until September, 1942, that full recognition was given to manpower considerations in the policies of the various procurement agencies.] The same restriction was placed upon contract renewals.

Group II—Areas of labor stringency or in which a labor shortage could be anticipated within six months. In these no new contracts could be placed but renewals were permitted provided no additional workers were required.

Group III—Areas in which a general labor shortage could be anticipated after six months.

Group IV—Areas in which the labor supply was and would continue to be adequate to meet all known labor requirements.

Some 32 areas were immediately classified as Group I.

At the same time for the guidance of Selective Service a list of nondeferable occupations and activities was issued. Its purpose was to promote the transfer into war jobs of those workers of draft age whom a civilian economy in war time could most easily do without. These included the bootblacks, bus boys, elevator attendants, etc., and men employed in the manufacture of costume jewelry, greeting cards or in selling antiques, liquor, novelties, etc. So long as they continued in these jobs

or occupations they could be drafted irrespective of their dependency status.

A few weeks later on March 3 a minimum wartime work week of 48 hours was announced to become operative in the 32 Group I areas and also nonferrous and metal mining, lumbering and the iron and steel industry. [The adoption of the 48-hour week remained discretionary with areas classified as Group I after this date until November, 1943, when it became mandatory for all Group I areas.] The effect of this was to curtail the hiring of new workers and release workers for other needed jobs by the fuller utilization of the present labor force.

In April, the President issued his famous "Hold the Line" order which froze all wages at current levels, except for adjustments under the Little Steel Formula or to correct substandards of living. A national regulation therefore was issued under which the transfer of workers in essential activities into other jobs, essential or nonessential, at a higher rate of pay was severely restricted. A worker could secure a "Certificate of Availability," i.e., the right to transfer to another job, only in case he was discharged or laid off for seven days, or where he could establish undue hardship, or that wage or working conditions were below Federal or State standards, or that he was not being employed at full time or at his highest skill.

The necessity of setting up working controls to enforce this regulation resulted in the widespread adoption of local plans even in areas where there were as yet no acute shortages of labor.

The enunciation of this basic program for employment stabilization emphasized an increasing tendency toward decentralized administration. The Washington office restricted itself more and more to general program and policy making and overall supervision. To the regional and area offices was left the task of interpreting these policies in the light of regional and area conditions and the responsibility of drawing up and executing specific local plans tailored to meet specific local pressures.

In this way there was developed a succession of fairly comprehensive area plans. Those of Buffalo, Baltimore, Dayton and Springfield, Louisville, Hartford, Wichita, and Fort Worth were noteworthy examples. These plans represented varying degrees of control and many incorporated measures far more drastic than those set forth in the minimum standards.

Taking into consideration the difficulties involved, many of these plans achieved a surprising degree of success. In Buffalo, the number of plants behind schedule was reduced within a few months from 64 to 13. In Dayton and Springfield, Ohio, an intensive community campaign took the area out of a Group I classification within four months. A similar campaign in Louisville, Ky., enabled that area to maintain a Group II status against pressures that were projecting it into Group I. Nearly all, in fact, succeeded in reversing the shortage trends and established a practical basis for further development.

In the meantime, the problem of underutilization of the existing labor supply had been receiving serious attention. In a vast number of plants and factories, this factor was present in proportions sufficient to involve an alarming waste of manpower.

Effective manpower utilization was defined as the "most productive use of the minimum amount of labor necessary for production under working conditions that will maintain worker effectiveness and morale."

To aid employers in achieving this aim a Bureau of Utilization was established in February, 1943, with technically-equipped consultants to make plant surveys. These surveys were made only at the request of the employer. They were in no sense routine calls, but actual attempts to solve some of the more pressing problems of an employer such as excessive turnover, absenteeism, production lags, low morale, or a breakdown of community facilities.

In many plants, these consultants were able to cut down the time of training new workers by as much as 50 per cent. In others, production per man hour was increased by a thorough re-scheduling of work going through the plant. In others, difficult operations were re-engineered and reduced to simple elements so that unskilled workers could be used, thus releasing scarce skilled workers for other jobs. In others, the more extensive employment of women was indicated to relieve the strain on male employment. Not only was labor-hoarding resolutely attacked, but it was found possible, in innumerable instances, to scale down tremendously—or even cancel outright—the demand for new workers on the part of an employer without endangering full production schedules.

Wherever recommendations were carried through vigorously by the employer concrete savings in manpower were effected and the strain on the area supply lightened.

During the spring of 1943, the labor market began to tighten rapidly. This was due to the increasingly heavy demands for workers to meet the increasingly heavy schedules of war production; and also to the severe drain on the labor force by the monthly Selective Service calls. More and more areas were classified as Group I and by midsummer the manpower problem had reached an acute stage.

In a sense, the crisis derived not from the fact that the manpower of the nation had been ineffectively mobilized but because it had been mobilized so well. By July, 1943, the number of men and women either at work or in the armed forces had risen to 63,600,000—an increase of nearly a third over the 1940 figure and representing the largest number of workers ever employed at one time in the history of the country. Of these, 17,200,000 were women, an approximate two-thirds increase over the 1940 figure of 10,800,000.

From Pearl Harbor to August, 1943, our armed forces had risen from 2,000,000 to 9,600,000. Despite these huge withdrawals from industry the number of workers engaged in the manufacture of munitions rose from 6,500,000 to 9,600,000.

During this period, the nation had maintained in agriculture a labor force of over 10,000,000 and also a higher standard of living than any other country in the world. But eighteen months after Pearl Harbor, the number of new workers entering the labor market had been sharply reduced. The same thing was true of workers transferring to war jobs and the enormous backlog of some 9,000,000 unemployed with which the 1940 rearmament program had started, was down to the practical minimum of under 1,000,000.

In spite of this there were still heavy demands to be met from industry and our armed forces. Estimated manpower requirements for the period July, 1943, to July, 1944, were put at 3,300,000. [By Jan. 1, 1944, this figure had been revised downward to 2,600,000.] Of these, 2,000,000 were scheduled to go into the Army or the Navy.

This latter demand presented a two-fold problem. The nation was definitely scraping the bottom of the barrel of its available manpower supply.

As of October 1, nearly every draftable single man or "post-Pearl Harbor" father would be in uniform. Aside from those who were unable to meet the physical standards of the armed forces, those remaining were, broadly speaking, the skilled workers in key jobs vitally necessary to the production of war materials and agricultural products. For Selective Service to take these men in order to fill their calls would be seriously to cripple our war industries. The alternative was the drafting of "pre-Pearl Harbor" fathers. This, therefore, was ordered.

To meet the demands of industry, a vigorous campaign was set in motion to recruit a million more women, chiefly housewives, for war-useful jobs and to transfer more workers from less essential activities. The need for more women in the "unglamorous" jobs such as laundries, restaurants, transportation, etc., was especially pressing.

By this time the number of Group I areas has reached 55. Labor turnover was still high, separations averaging 8.2 per cent a month throughout the country and in some areas as high as 29 and 39 per cent. The strain imposed by community and plant conditions was causing vast numbers of women to quit their jobs entirely.

New regulations incorporating a more comprehensive set of employment stabilization standards were drawn up and local programs based upon these standards ordered put into operation, by October 15, in every area throughout the country. In essence this program stated that no worker engaged in an essential or locally needed activity could be hired by another employer unless such hiring aided the effective prosecution of the war and no worker could be hired for work in a critical occupation except through referral by the USES.

Along with this program was issued a list of critical occupations and activities and also an expanded nondeferable list.

Events, however, were moving rapidly. A particularly serious crisis was developing on the West Coast. Here was concentrated a large proportion of our vital aircraft manufacture and shipbuilding. It was to this region that the migration of labor from other parts of the community had been the heaviest. Turnover was abnormally high and accentuated by certain unfortunate wage differentials in the aircraft industries. Labor-hoarding was especially rampant. Furthermore, this region had been among the last to establish an effective WMC organization.

To meet these conditions it was necessary to tie in the activities of the various procurement agencies with a single comprehensive program. On Sept. 15, 1943, the so-called West Coast Plan was announced by the Office of War Mobilization. This program called for Area Production Urgency Committees and Labor Priorities Committees to determine which establishments had first claim on available manpower. Controlled referral first developed in Buffalo and other communities, made it possible to channel workers into the priority jobs where they were most needed. Other tested controls helped keep them there.

At the same time, establishments were refused priority ratings unless they had instituted a thorough-going utilization program within the plant and could demonstrate that they were making the maximum use of their present labor force. Failing to do this, they were denied the right to hire any more workers and workers already in their employ could be hired away for other priority jobs. In the practical working out of this plan, ceilings were imposed on the number of workers which a plant might hire and employers were forced by utilization and other methods, to "live within their means."

By the end of the year the West Coast Plan was operating with reasonable effectiveness and the situation was being brought under control. Indications were that the basic pattern established would be adopted by other labor shortage areas throughout the country, the number of which in December had risen to around 70.

By the end of the year there was good reason to believe that, after a long period of necessary trial and error, the WMC had succeeded in developing a sound and workable method of dealing with manpower shortages.

This conviction was expressed in a statement issued in November by the members of the WMC National Management-Labor Policy Committee which read in part as follows:

The War Manpower Commission has had widespread and varied experiences with locally developed manpower programs under decentralized administration, and with controls of one form or another in various critical situations. In the opinion of the Committee, out of these experiences has emerged a practical approach that is basic to the solution of any critical war manpower problem whether it be local or national in character.

In December, as a result of long public controversy over the drafting of fathers, Congress by legislative action withdrew the Selective Service System from the authority of the WMC. Since, however, the Selective Service Director, on instructions from the President, continues to cooperate closely with the WMC on all matters of policy, the net effect of the action is of minor consequence.

Certain statistics give some idea of the scope of the WMC activities. From January, 1941, through September, 1943, the USES has placed over 25,000,000 persons in industry or agriculture. The training programs of vocational schools and colleges have enrolled over 6,000,000 for war industry and military jobs. The Training Within Industry program has enrolled over 870,000 in courses for the training of foremen and supervisors, who in turn have trained hundreds of thousands of workers according to WMC methods. The Apprenticeship Training Service has assisted more than 36,000 in establishing in-plant training courses.

Manning Tables are in use in some 7,000 plants and factories and Replacement Schedules in many thousands more. Labor requirement figures for forecasting labor trends are based upon figures obtained from over 20,000 industrial establishments.

The Bureau of Utilization, in the first seven months of its organized activity, made comprehensive surveys in over 1,300 plants throughout the country and recommendations made have resulted in the saving of tens of millions of man-hours. Present surveys are being made at the rate of some 250 to 300 a month, concentrated chiefly in areas of acute labor shortage.

Organization. The War Manpower Commission under the Chairmanship of Paul V. McNutt, Federal Security Administrator, includes representatives of the War, Navy, Agriculture, and Labor Departments, the Federal Security Agency, the War Production Board, the Selective Service System, the U.S. Civil Service Commission, the National Housing Agency and a joint representative of the War Shipping Administration and the Office of Defense Transportation.

The Chairman acts with the advice of the members and after consultation with them and is responsible for the administration of the Commission, the final determination of policy and programs and for the issuance of appropriate directives.

On matters of policy and program, the Chairman consults with two advisory committees:

(1) The Management-Labor Committee composed of R. Conrad Cooper, Assistant V. P., Wheeling Steel Corporation; Frederick C. Crawford, President, National Association of Manufacturers; Eric A. Johnston, U.S. Chamber of Commerce; Philip Murray, President of the CIO; William Green, President of the A.F.L.; H. W. Fraser, President, Order of Railway Conductors of America; Albert S. Goss, Master, National Grange; Edward K. O'Neal, President, American Farm Bureau Federation; and James G. Patton, President, National Farmers Union.

(2) The Women's Advisory Committee, Miss Margaret Hickey, Chairman.

Clinton S. Golden, Vice-Chairman of the Commission, supervises relations with organized labor and maintains a liaison with the War Production Board.

The Deputy Chairman and Executive Director, Lawrence A. Appley, is responsible under the Chairman for general direction and staff supervision and for the execution of policies and direction of programs. James L. Bond is Deputy Executive Director.

William Haber is assistant executive director for Program Development. This division formulates over-all manpower policies and programs, is responsible for all reports and research, compilation and release of labor market data, and coordinates the statistical activities of the Commission.

Vernon McGee is Assistant Executive Director for Business Management in charge of budget, finance, administration, and personnel.

Leo Werts is Assistant Executive Director in charge of Field Service.

The *Bureau of Placement* (A. W. Motley, Acting Director) develops policies and programs for the recruitment and placement of workers in agriculture and industry, either private or government controlled, through the U.S. Employment Service and other channels.

The *Bureau of Training* (Philip Van Wyck, Acting Director) develops unified programs and policies to meet the training needs of wartime employment.

The *Bureau of Manpower Utilization* (Dr. Eugene Bewkes, Director) develops policies and programs to obtain the maximum utilization of manpower in plants and factories under war conditions.

Directly under the Executive Director are twelve Regional Directors and one for the territory of Hawaii. These, in turn, supervise the activities of the State Directors and some 200 Area Directors. Each Regional, State, and Area Director functions with the advice of a Management-Labor Committee composed in equal parts of representatives of organized labor and employers.

See CIVIL SERVICE COMMISSION; EDUCATION; SELECTIVE SERVICE ADMINISTRATION; UNITED STATES under *Manpower*. Compare topics listed under MANPOWER.

PAUL V. McNUTT.

WAR MOBILIZATION, Office of (OWM). The Office of War Mobilization was established within the Office for Emergency Management by Executive Order 9347, of May 27, 1943, to provide for the more effective coordination of the mobilization of the Nation for war. A War Mobilization Committee was established by the same order to advise and consult with the Director of War Mobilization, who was designated Chairman.

For functions and activities, see UNITED STATES under *Office of War Mobilization*. The membership follows:

Director of War Mobilization..... James F. Byrnes
 General Assistant..... Marvin Jones
 Public Relations Assistant..... Walter Brown
 General Counsel..... Ben Cohen
 Adviser on Production..... Fred Searls
 Secretary to War Mobilization Committee..... Donald Russell
 War Mobilization Committee
 Chairman..... James F. Byrnes
 Secretary of War..... Henry L. Stimson
 Secretary of the Navy..... Frank Knox
 Chairman, Munitions Assignments Board..... Harry L. Hopkins
 Chairman, War Production Board..... Donald M. Nelson
 Director of Economic Stabilization..... Fred M. Vinson

WAR PRISONERS. See ALGERIA, JAPAN, and NEW ZEALAND under *History*; RED CROSS; RELIEF and REHABILITATION; WORLD WAR under *Casualties*.

WAR PRODUCTION. For an over-all report on United States war production see BUSINESS REVIEW under *Basic Industries* and *Armament Production* (including charts); UNITED STATES under *Production*; and, for details of the WPB annual report, WAR PRODUCTION BOARD. See also LABOR CONDITIONS; LIVING COSTS.

War Requirements. See AERONAUTICS; LEND-LEASE PROGRAM; MILITARY PROGRESS; NAVAL PROGRESS; WAR PRODUCTION BOARD.

War Contracts. See topics listed under WAR CONTRACTS. For frauds, see FEDERAL BUREAU OF INVESTIGATION.

War Plants. See FIRE PROTECTION; FOUNDATIONS; HEATING and VENTILATING; MINES, BUREAU OF; articles on industries and products.

War Workers. See FEDERAL SECURITY AGENCY; LABOR CONDITIONS; topics listed under MANPOWER and WOMEN IN INDUSTRY; PRISONS; VOCATIONAL TRAINING.

War Research. See CHEMISTRY; COMMUNICATIONS; NATIONAL BUREAU OF STANDARDS; PHOTOGRAPHY; PHYSICS; and a number of the articles listed below.

Products and Industries. See AERONAUTICS; BOMBS; CHEMICAL INDUSTRY; ELECTRICAL INDUSTRIES; ELECTRIC LIGHT and POWER; HIDES and LEATHER; LIQUOR INDUSTRY; MACHINE BUILDING; MACHINERY INDUSTRY; MOTOR VEHICLES; SHIPBUILDING; all articles on minerals and various other products.

Foreign Production. See AUSTRALIA, CANADA, GERMANY, GREAT BRITAIN, and other belligerent countries, under *Production* and *History*.

WAR PRODUCTION BOARD (WPB). The Federal agency charged with the general direction of the U.S. Government's war procurement and production program; established Jan. 16, 1942. (For an account of its predecessor organizations, the National Defense Advisory Commission, the Office of Production Management, and the Supply Priorities and Allocations Board, see those articles in the 1941 or 1942 YEAR BOOK.)

The War Production Board, headed for the second successive year by Chairman Donald M. Nelson, underwent a number of organizational changes in 1943, in keeping with changing conditions. As the problems in connection with the supply and distribution of materials diminished, and greater emphasis was placed on full utilization of the war plant which had been built up as well as on the serious shortage of manpower, the organization of WPB was altered to facilitate action on these new problems.

The first and principal change was the creation of the Office of Executive Vice Chairman. To this vitally important post Mr. Nelson appointed Charles E. Wilson, President of General Electric

Company, who had joined the Board in 1942 as Production Vice Chairman. Mr. Wilson was made responsible for conduct of production programs and operations. Subsequently, a Program Vice Chairman and an Operations Vice Chairman were appointed. At the end of the year these positions were filled, respectively, by J. A. Krug, a top executive in WPB and its predecessor, the Office of Production Management, and Lemuel R. Boulware. Mr. Boulware, who joined the Board early in 1942 was serving as deputy controller of shipbuilding at the time of this appointment. Mr. Krug also became chairman of the Requirements Committee.

Other new offices established under the Executive Vice Chairman during the year included those of vice chairmen for manpower requirements, labor production, metals and minerals, and that of a vice chairman in charge of field operations, Facilities Bureau, Bureau of Planning and Statistics, Procurement Policy Division, Office of Production Research and Development, and Resources Protection Board. Filling the latter position was Donald D. Davis, formerly Operations Vice Chairman. Mr. Davis was also chairman of the Facilities Committee.

The two new vice chairmen for labor problems were Clinton S. Golden, Pittsburgh, Pa., working on labor scarcities and surpluses, and Joseph D. Keenan, Chicago, Ill., responsible for labor productivity. Mr. Golden went to the Board from the position of assistant to President Philip Murray of the United Steelworkers of America (C.I.O.). Mr. Keenan is secretary of the Chicago Federation of Labor (A.F.L.).

In the last days of the year Arthur H. Bunker, former chief of the Aluminum and Magnesium Division, became vice chairman for metals and minerals and as such became directing head of the steel, copper, and aluminum divisions, the Minerals Bureau and the Minerals Resources Coordinating Division and its related committees.

During the year William L. Batt became Vice Chairman for International Supply. Mr. Batt also was Chairman Nelson's representative on the Combined Production and Resources Board and, by appointment by President Roosevelt, American member of the Combined Raw Materials Board (qq.v.).

New agencies set up during 1943 and directly responsible to Chairman Nelson were the Office of War Utilities and the Office of Civilian Requirements. The first is headed by J. A. Krug, while Arthur D. Whiteside is the vice chairman heading the office which, as a claimant agency, represents the needs of the civilian population in a war economy.

An important development of the year was the increasing responsibility given the thirteen WPB regional offices. Starting with a grant of authority to approve or reject applications for priority assistance in certain limited categories, the decentralization program was extended until, by the end of the year, within policies laid down in Washington, the regional directors were exercising a considerable amount of discretionary judgment.

WAR PRODUCTION, U.S.

In 1943, the United States war machine, quickly assembled and brought into quantity production during the year following Pearl Harbor, was geared with a higher degree of precision and stepped up almost to peak production. At the same time, many of the raw materials bottlenecks which had developed in 1942 were broken.

By the end of the year plane production had been pushed to reach the goal set by President

Roosevelt shortly after Pearl Harbor—more than 8,800 a month. The 66,000 planes delivered in 1943 represent a phenomenal increase over the 6,000 delivered in 1940, the 20,000 in 1941, and the 48,000 in 1942.

In the first six months of 1943 more merchant vessels were delivered than in all of 1942. Month after month the total has been climbing, until the current rate of merchant ship construction is many times higher than the current rate of sinkings. In the second half of 1940, only 33 merchant ships slid down American ways. In 1941 the total was 103; in 1942 it reached 727; and the estimated total for 1943 is about 1,750.

Between January and July of 1943 a hundred warships came off the ways, and shortly after the middle of the year Secretary Knox estimated that by the end of 1943 the size of the American naval fleet would be double its size at the beginning of the year.

Production of ground ordnance and signal equipment continued to exceed all previous records. Average monthly production in 1941 was almost 4½ times that of the last six months of 1940. In 1942 the monthly average was 8 times that of 1941, but in 1943 it was about 14 times that of 1941.

Increases in war production have been paralleled by increases in war expenditures. The average daily rate of war expenditures, which had jumped from \$81,200,000 to \$235,600,000 in 1942, progressed from \$240,500,000 in January, 1943, to \$299,800,000 in November.

By the beginning of 1943, many steps in transforming America into the "arsenal of democracy" had already been taken. Conversion from peacetime to war production was no longer a major problem. America's Government-financed war plant was 61 per cent completed. The industrial facilities program—including construction, machinery, and equipment—which had been put in place by the end of 1942 reached a total of approximately \$12,294,000,000 and was expected to reach \$17,564,000,000 by the end of 1943. Throughout 1943 the rate of facilities construction moved along a planned decline, with the result that more and more of the nation's resources could be thrown into direct production of munitions. By July, the facilities program was more than 80 per cent completed. At the year's end, except for certain special programs, and some special machinery, the United States had all the machine tools and the capital equipment it needs to produce everything necessary to defeat the enemy.

Materials. A continuing problem since the beginning of the war has been that of providing sufficient raw materials. Domestic production of materials had to be increased, available foreign sources had to be developed, and strict economy had to be practiced in the use of all materials, so that the goals for the production of finished war goods could be met. Though many difficulties remain to be surmounted, great strides have been made in increasing the materials supply, and many obstacles that seemed insurmountable in 1942 were hurdled in 1943. See FOREST PRODUCTS; RUBBER; and the articles on minerals and metals, particularly ALUMINUM, CHROMIUM, COPPER, IRON AND STEEL, LEAD, MAGNESIUM, MANGANESE, MOLYBDENUM, NICKEL, TIN, TUNGSTEN, VANADIUM, ZINC.

Balanced Production. Balance—between supply of materials and finished end products, between finished end products and the dictates of the war program—plus timing are the prime essentials in efficient war production. Each manufacturer must be assured of receiving exactly the right amounts

of materials and parts, at the right time, so that he can turn out his product according to schedule. The manufacturer of aircraft, for example, must have enough aluminum sheets, aluminum extrusions, propellers, aircraft engines, and other materials and parts available on his production line, when he needs them, to meet his production program. Also, the relationship between the number of propellers and the number of aircraft engines made for a certain type of plane must be exactly right. Over-all production must be so balanced that the right number of tanks are made in relation to ships, for example. At the same time, U.S. production must be coordinated and integrated with that of the other United Nations.

To insure a measured, steady flow of raw materials to war plants, WPB devised the Controlled Materials Plan, in operation since April, 1943. Under this plan, WPB divides the available controlled materials—copper, steel, and aluminum, in specified forms and shapes—among the "claimant agencies," such as the Army, Navy, Maritime Commission, and others, charged with procuring the essential military and civilian needs of the United States and the other United Nations. Each claimant agency, in turn, adjusts its program to fit its share of materials and divides it among the manufacturers who will fabricate it into finished products according to prearranged time schedules.

But CMP, though it solves the biggest—if not the toughest—problem of scheduled production—that of material shortages—cannot insure that all the necessary parts, particularly the critical ones, with wide uses in war production, are available for fabrication into a plane or tank or essential civilian item at the time and place required. For lack of enough bearings, a fan, or a compressor, a vital war machine may not be assembled according to schedule.

Scheduling production of hard-to-get parts, or "critical components," as they are commonly called, was WPB's biggest production job in 1943. It was accomplished by means of scheduling procedures established in a General Scheduling Order issued in February. The order requires manufacturers to indicate realistic delivery dates for parts that are in insufficient supply, and assures that the plants best able to produce particular types of critical parts produce those parts and leave production of other types to other plants. These procedures are similar to the scheduling devices of CMP, except that specified critical components, instead of raw materials, are channeled to the war plants. The measure of their success is clearly indicated by the steadily rising curve of war output.

Over-all scheduling of production, of major importance from the first, in 1943 became more necessary than ever. Scheduling is the keynote of efficiency, and the only way the United States can now produce what is demanded, and in the proper proportions, is to make increasingly better use of plants, materials, and manpower already employed in war production.

The slack we had two years—or even a year—ago has now been pretty well taken up. Manpower is particularly short. Millions of additional workers will be needed to produce aircraft, ships, munitions and other war equipment if the goals set for 1944 are to be achieved.

It was a fairly simple matter, in the beginning to transfer resources from nonessential to essential uses. Now a more difficult choice—between essential and more essential uses—must be made. Increasing the production of one weapon of war may mean reducing the output of another. Ad

justments in the production machine must be more exact than ever before. Because the raw materials used in one type of product are more urgently needed for another type of product, plants may have to be shifted from one type of production to another. When the immediate requirements for one kind of war goods have been met, production may have to be discontinued or reduced temporarily.

A considerable amount of reconversion has already been effected. One plant, built to make recoil mechanisms for cannon, has been changed over to make struts for aircraft landing gear. Another plant, constructed to make tank armor, is now producing engine cylinders. Certain ammunition plants are now producing aircraft engine parts and accessories. Other plants, built for the production of airplane engine accessories, are producing small arms for the Army.

Besides adjustments such as these, other adjustments are needed to mesh the U.S. war production program into the production programs of the other United Nations, in accordance with overall military requirements. Coordination and integration on an international basis are effected through the Combined Production and Resources Board and the Combined Raw Materials Board (q.v.), made up of representatives from the United Kingdom, Canada, and the United States, working in close collaboration with the Combined Chiefs of Staff. The Combined Boards survey the over-all demands of the United Nations in relation to the available supply of critical materials and products, such as rubber, coal, steel, copper, hides and leather, wheeled vehicles, internal combustion engines, and others. Their recommendations for combined action, designed to achieve maximum utilization of available resources as well as the most economical use of shipping facilities, are then passed on to the production agencies of the nations involved. For example, a recent recommendation of the Combined Boards with respect to effecting increased output of coal in British mines will be carried out through the offices of WPB in 1944. About one-fourth of the requirements of the British coal mining mechanization program for this year will be met by U.S. production.

Conservation of Materials. Simultaneously with the step-up in demand for raw materials, the importance of enlarging and replenishing the country's stockpiles through conservation has increased.

For example, in 1942 a nationwide fuel conservation campaign had been initiated. In September, 1943, WPB, in conjunction with other Government agencies and private industry, found it necessary to launch another nationwide program, to induce every industrial and commercial plant as well as every private citizen in the United States to conserve not only coal, oil, and gas, but also electricity, water, and communications and transportation facilities. Even a reasonably economical use of coal for domestic and commercial heating is expected to save over 20,000,000 tons annually. A ten per cent reduction in use of electricity will save over 4,000,000 tons of coal or its equivalent and more than 75,000,000 lamp bulbs. A ten per cent reduction in the use of manufactured gas will save over 1,500,000 barrels of fuel oil.

As the materials, facilities, and manpower needed for production of shipping containers became increasingly scarce during the year, reuse of existing containers developed into a "must." Metal was so urgently needed for war purposes that none could be used for containers unless no other material would serve. The consumption of wooden containers was 25 per cent ahead of all available sup-

plies. The production of fiberboard for corrugated containers was running thousands of tons a week behind actual consumption. Narrow-mouth glass jars were 18 per cent oversold, and wide-mouth jars 26 per cent oversold. Importation of textiles for bags was difficult, and domestic production facilities were inadequate to meet the increased demand. To give immediate impetus to the conservation of shipping containers through their reuse by manufacturers, wholesalers, and retailers everywhere in the United States, the Containers Division, WPB, launched its Container Re-Use Program in October.

Another new campaign aims to alleviate the serious shortage of good quality rope and cordage. The Cordage Institute developed the campaign in cooperation with WPB, launching it on October 1, only two months after the idea was originally broached by the War Advertising Council. The campaign is directed primarily to manufacturers of rope and cordage, and through them reaches users with the message that their existing supplies of rope must be carefully handled so that the hard fiber content will "last and last and last." The campaign material was paid for by the industry.

A program to conserve cutting tools has been in operation for several months and lately has received new impetus from the growing shortage of labor for making replacement tools.

Since the beginning of the war, thousands of tons of critical materials as well as countless man hours have been made available for war production by simplifying and standardizing the designs, models, and sizes of industrial products, by substituting less scarce materials for the more scarce, by salvaging materials that prewar America threw onto the junk pile, and by revising specifications.

Simplification and Standardization. As in 1942, simplification—the elimination of unessentials from an item or a line of items—and standardization—the restriction of production to certain specified types of items in a given line—were effected in various lines of goods in 1943.

Since March 15 new wood furniture patterns have been prohibited, and since July 1 each manufacturer has been limited to production of 35 per cent of the patterns he offered in September, 1941, or 24 patterns in all, whichever is greater. Simplification has enabled the furniture manufacturer to make the most efficient use of still available materials and labor. Luggage production was limited to seven standard types, but each manufacturer was permitted to produce these types in as many as 14 different styles. Similar simplification and standardization orders were issued to cover silver plated flatware, greeting cards, various types of tools and hardware, blankets, knitwear, and other items.

Equipment for the armed forces has likewise been simplified and standardized wherever possible, not only to save materials, labor, and facilities, but also to facilitate replacement of parts. For example, early in the year the number of basic air-cooled gasoline engine models was reduced by 50 per cent, and each basic model produced by a given manufacturer was made to take a single type of carburetor, muffler, air cleaner, spark plug, and other parts. A uniform parts-and-maintenance manual was also accepted.

Substitution. Synthetic rubber, brought into higher production in 1943, was employed for an increasing number of uses as a substitute for natural rubber, notably in making tires. The camelback for recapping, on which most motorists will ride for some time to come, is made of a combination of reclaimed

rubber and 40 per cent Buna S and is now available in greater quantity and better quality than it was earlier in the year. Buna S is also standard for tires for motorcycles, bicycles, tractors, wheelbarrows and other implements, and truck and bus tires in the smaller sizes.

Ceramics and glass continued to replace metals for such items as cooking utensils and dress accessories. In the early part of the year, research was begun in connection with ceramic stoves, and by the end of the year a satisfactory ceramic cooking stove model, weighing less than one-third as much as the 1,035-pound prewar metal type which it supplants, had been developed. Actual production is expected to be under way in the early part of 1944. Use of ceramic cooking stoves and ceramic space heaters, now also in the final stage of development, will not only conserve metal, but also utilize existing ceramic facilities to a fuller extent.

Wood and paper continued to be used as substitutes, but the increased demand for these materials, in the face of a declining supply of manpower, has caused a scarcity of these in turn, and their use as substitutes is being limited. (See *FOR-EST PRODUCTS*.) Plastics (q.v.), formerly regarded as substitutes, have become so critical that they may be used only where they can serve a particular purpose better than the material they replace. Certain other materials, though critical, have also come into use as substitutes because they are relatively less scarce than the materials they replace. Steel, for instance, replaces copper in the new penny, carbon steel takes the place of stainless steel in kitchen cutlery, and shoe eyelets, formerly of brass, are now made of zinc-coated steel.

An important saving has been accomplished in packing boxes for caliber .45 ammunition. Formerly lined with terneplate, which is steel covered with an alloy consisting of approximately 25 per cent tin and 75 per cent lead, they now have a wax-dipped liner. By the elimination of solder, along with terneplate, an additional 7 pounds of tin for each 100,000 rounds is saved.

Facilitation of production through the use of castings, pressings, assemblies, and stampings instead of large forgings is a type of substitution which has enabled the Navy to specify alloys and products that are more easily manufactured to replace those involving longer and more expensive methods. Another example of substitution by the Navy is that of the use of reclaimed and synthetic instead of crude rubber in the manufacture of self-sealing tanks for airplanes.

Salvage. Salvage of waste paper and collection of iron and steel scrap are the most urgent problems currently fostered by the Salvage Division of WPB. At the same time that military and industrial uses of paper have skyrocketed, manpower shortages in the woods have kept the production of wood pulp for containers and other products almost 25 per cent below that of 1942. Waste paper salvage is of crucial importance in alleviating the wood pulp shortage. Early in 1943, the Salvage Division renewed its drive for the collection of old containers, kraft paper, and brown paper in localities where waste material dealers were equipped to handle it. In July the drive was extended to include all grades of paper and all parts of the United States. At the end of the year waste paper was being collected at the rate of 500,000 tons a month, still more than 100,000 tons short of the amount needed by the paper mills.

New impetus was given to the continuing program for the collection of iron and steel scrap by the inauguration on October 1 of the "Victory

Scrap Bank," a special drive to bring lagging collections to a total of 15,000,000 tons for the last six months of the year. Maintaining a safe margin in the supply of scrap to carry out a munitions production program twice as big as that of 1942 has been a major problem in 1943. The coal strike, which caused increased use of scrap in steel furnaces, further aggravated the problem. For this reason, the drive, scheduled to be terminated November 15, was extended indefinitely. The scrap drive is being conducted through 16,000 salvage committees and scores of organizations with more than a million volunteers, who work in conjunction with local scrap dealers and see that scrap is collected and "deposited" in the community "scrap bank," for industry to draw upon as needed. Industry, through its own salvage committees, is working to bring collections of industrial scrap to a total of 9,800,000 tons for the last half of the year.

Collection of household fats, initiated in August, 1942, reached a peak of almost 8½ million pounds in June, 1943, and then declined slightly. Estimated total for the year was 115,000,000 pounds, about 57 per cent short of the 200,000,000 pounds needed for glycerin production. Collections in 1944 are expected to reach a grand total of 230,000,000 pounds, chiefly through the cooperation of the Soap and Glycerin Manufacturers' Association in extending financial support for advertising.

Though by the end of the year the impressive total of 200,000,000 tin cans, or 20,000 tons, was being collected for detinning and other war purposes each month—20 times as many as at the beginning of the program—two out of three tin cans that go into homes were still being lost to the war effort. Facilities are available to handle 400,000,000 salvaged tin cans, and that number will be the goal of the 1944 campaign.

The salvage of silk and nylon stockings for use in the manufacture of powder bags, parachutes, and other military items was discontinued September 30, after a grand total of more than 50,000,000 pairs had been donated by the women of America in the eleven months during which the campaign was in operation. Since no silk or nylon had been available for the manufacture of hose for some months previous to that date, the proportion of these materials in relation to the poundage collected had been declining steadily.

Revision of Specifications. Government specifications must be continually revised and new requirements established in order to keep pace with rapidly shifting stockpiles of vital war materials. Working closely with the Army, Navy, and other interested Government departments, WPB's Conservation Division, by means of its specification projects, has been tackling the problem of conserving materials in limited supply, finding substitutes for the most critical materials, and bringing specifications in line with the changing supply picture.

The number of Government department specifications already revised or under development is mounting well past the 800 mark. The materials and products for which Federal specifications have been completed or are currently being prepared include: brass and bronze castings and ingots, aluminum alloy castings, salt spray corrosion tests, paint colors, rubber, plastics, paper, 66-gallon steel drums for gasoline, brushes, and certain types of containers.

Civilian Requirements. In 1943, for the first time since the beginning of the war, the problem of providing civilians with the goods they need to maintain their health and working efficiency began to reach an acute stage with respect to certain cate-

gories of items. Until the middle of 1942, inventories were sufficiently large, and the war program left enough resources free to supply aggregate civilian demands at an expanding volume. At the same time, the increased individual incomes obtained from war production and related activities insured that these expanding demands would result in actual purchases. Since that time inventories have been falling, while manpower and facilities for civilian production and distribution have been seriously reduced. Peak war schedules are placing additional claims on our national resources.

The Office of Civilian Requirements, successor to the Office of Civilian Supply, WPB, in fulfilling its function of maintaining production and distribution of all essential civilian goods insofar as is consistent with demands upon materials, facilities, and manpower for war production, is taking various steps to correct this situation. By directing manufacturers or distributors of such urgently needed items of farm equipment as shovels, forks, and the like to set specified quantities of these products aside for farmers, OCR is making it easier for farmers to get the equipment they need to meet the high food production goals. Priority assistance has also been given to manufacturers of needed types of baby goods, to replenish the falling supply.

A continuing project of OCR has been a nationwide survey, culminating in the questioning of 5,739 households and conducted according to the best modern survey techniques, to determine what shortages in civilian goods are causing actual hardship, what products in short supply are in most acute demand, and whether available supplies are being fairly distributed. Future action by OCR will be based in large measure on the results of this survey.

See various industries, as **MACHINERY INDUSTRY**, **MOTOR VEHICLES**, products, etc.; **BUSINESS REVIEW**; articles on minerals; **POSTWAR PLANNING**; **PAPER AND PULP**; **PRISONS**; **SMALLER WAR PLANTS CORPORATION**; **UNITED STATES under Production**. For limitation orders, see **NATIONAL BUREAU OF STANDARDS**; for war production charts, see **BUSINESS REVIEW**.

DONALD M. NELSON.

WAR PSYCHOLOGY. See **PSYCHIATRY**; **PSYCHOLOGY**. **WAR PUBLIC WORKS, WAR PUBLIC SERVICE PROJECTS.** See **FEDERAL SECURITY AGENCY**.

WAR RECREATION COMMITTEES. See **FEDERAL SECURITY AGENCY**.

WAR RELIEF. For statistics, see the article which follows; also **ALGERIA, CHINA, GREECE, TUNISIA, and UNION OF SOVIET SOCIALIST REPUBLICS**, under *History*; **RED CROSS**; **RELIEF AND REHABILITATION**.

WAR RELIEF CONTROL BOARD. The President's War Relief Control Board was established by Executive Order, July 25, 1942, following recommendations of a committee appointed by the President, at the request of the Secretary of State, as to what steps should be taken to assure the efficient and economical administration of resources for war relief and welfare at home and abroad. Mr. Joseph E. Davies, former Ambassador to Russia, is Chairman, and Charles P. Taft, Director of the Office of War-time Economic Affairs of the Department of State, and Mr. Charles Warren, former Assistant Attorney General, are the other members, all serving without compensation.

The Executive Order transferred to the Board the administration of provisions of Section 8 of the Neutrality Act of 1939 relating to the solicitation

and collection of funds and contributions for relief purposes in belligerent countries formerly vested in the Secretary of State. All matters within the jurisdiction of the Board relating to the foreign policy of the United States, however, are determined after conference with the Secretary of State.

The Board is authorized to control, in the interest of the furtherance of the war purpose, all solicitations, sales of merchandise or services, collections, receipts, and distribution of funds and contributions for (1) charities for foreign and domestic relief, rehabilitation, reconstruction and welfare arising from war-created needs in the United States or in foreign countries; (2) refugee relief; (3) relief of the civilian population of the United States affected by enemy action; or (4) relief and welfare of the armed forces of the United States or of their dependents; "Provided, that the powers herein conferred shall apply only to activities concerned directly with war relief and welfare purposes and shall not extend to local charitable activities of a normal and usual character nor in any case to intrastate activities other than those immediately affecting the war effort."

The foregoing provisions do not apply to the American National Red Cross or to established religious bodies which are not independently carrying out any of the activities specified.

The Board is authorized to provide for the registration or licensing of persons or agencies engaged in any of the classes of relief and welfare activities as defined above. The Board also certifies eligible agencies for inclusion in the National War Fund established at its suggestion to conduct a single national appeal for all major war charities with the exception of the American Red Cross.

All registered agencies submit a periodic report to the Board including a statement of finances, the source of all monies received and expenditures for relief, administration, and other related purposes. A summary of these reports is compiled and published quarterly.

The Board transmits to the President reports and recommendations regarding war charities and the relationship of public and private organizations, resources, and programs in these fields.

Relief Statistics. Funds contributed during the year as reported by agencies engaged in foreign relief, registered with the Board, amounted to \$47,852,035. Of this sum, \$30,955,695 was reported as expended for relief in sixteen countries. Five countries—China, Russia, United Kingdom, Greece and Palestine—accounted for 90 per cent of this relief. The remaining \$11,332,530 collected during the year was for refugee relief and other relief of an international character. It is estimated that outstanding reports will increase funds contributed to about fifty million dollars for the year.

Contributions in kind of a dollar value of approximately \$12,708,145 were also reported as received during the year. Of this amount approximately \$9,928,947 worth was shipped abroad.

Total contributions and disbursements for all foreign relief since September, 1939, when agencies engaged in foreign war relief activities were first registered, are as follows:

	Receipts	Disbursements for Relief
Cash.....	\$128,377,749	\$103,819,010
Contributions in kind.....	32,856,793	30,127,595
Total.....	161,234,572	133,946,605

It should be understood that the figures above refer only to foreign war relief activities. (Also, the reports of a few agencies were still outstanding at

the time these statistics were compiled.) The number of registered agencies engaged in such work at the close of the year was 101.

There also were twenty-five agencies who were engaged in domestic welfare on behalf of the Armed Forces and the Merchant Marine. Their total contributions are not available, but \$65,352,000 was included in the National War Fund campaign for 1943 for these Services. See NATIONAL WAR FUND.

JOSEPH E. DAVIES.

WAR RELOCATION AUTHORITY (WRA). During 1943, the War Relocation Authority, a special wartime agency created to provide for the 110,000 persons of Japanese ancestry who were evacuated by military order from the Pacific Coast, focused its attention on the relocation of eligible evacuees on farms and cities throughout the Middle West and East. Pending relocation the WRA maintained the evacuated people in wartime communities known as relocation centers. Ten such centers were operated. At the beginning of the year only 400 evacuees had left these centers to accept private employment. By the close of 1943, however, nearly 17,000 persons had resettled across the country. Another 8,500 had left the centers on seasonal jobs, most of them in agriculture.

Leave privileges were extended to all evacuees except those whose records indicated that they might endanger the national security. Before granting leave permits, however, WRA explored community sentiment in the resettlement area to insure a satisfactory reaction to evacuee relocation. Job offers were carefully examined to provide the best qualified applicants and to prevent dissatisfaction after relocation.

In order to accelerate the relocation process, the Authority early in the year established field relocation offices in a number of key cities throughout the Middle West and East. Contacts between private employers and evacuee workers at the centers were thus facilitated. Focal areas for relocation were in the Great Lakes States and the intermountain West. Fifty per cent of evacuees resettled were either agricultural or domestic workers, the remainder being composed of various occupational groups such as office workers, technicians, service and sales employees, and professional workers. Large cities, particularly Cleveland, Chicago, Denver, and Salt Lake City, absorbed the greatest number of evacuees.

One of the most far-reaching events of 1943 was the registration of all male evacuees 17 years of age or older, which was carried out in conjunction with an Army recruitment drive for volunteers. On January 28, the Secretary of War reopened the ranks of the Army to Japanese American volunteers, after having halted all inductions of persons of Japanese ancestry shortly after Pearl Harbor. This registration and recruitment drive provided not only background information for the use of military authorities and Selective Service, but also provided basic data for determining individual loyalty and eligibility for leave clearance. A direct result of the drive was the recruitment of 1,200 Japanese American boys from relocation centers for eventual combat service.

In the late summer of 1943, the Authority began the segregation of all persons who, by word or action had indicated that their loyalties lie with Japan. By the end of October, approximately 15,000 evacuees had been segregated at Tule Lake center in Northern California. Included in this group were: (1) evacuees who had previously ap-

plied for repatriation to Japan, (2) citizen evacuees who refused to pledge unqualified loyalty to the United States, (3) persons whose past records cast doubt on their loyalty, and (4) immediate family relatives of persons in the first three categories. It was expected that the entire segregation process would be completed early in 1944. See OPINION RESEARCH CENTER, NATIONAL.

DILLON S. MYER

WAR RISK INSURANCE. See SHIPPING.

WAR SAVINGS STAFF. A division of the U.S. Department of the Treasury, organized as the Defense Savings Staff, Mar. 19, 1941. The field organization, which acts as a sales force for war bonds and stamps, is composed of over 800 salaried, approximately 30,000 full-time volunteer, and hundreds of thousands of part-time volunteer workers. For statistics on sales of bonds and stamps, see PUBLIC FINANCE.

WAR SHIPPING ADMINISTRATION. See MARITIME COMMISSION; PUERTO RICO under *History*; SHIPPING.

WAR TRAINING SERVICE. See CIVIL AERONAUTICS ADMINISTRATION.

WAR-TRANSFER PROGRAM. See CIVIL SERVICE COMMISSION.

WAR TRANSPORTATION EFFICIENCY COMMITTEE. See DEFENSE TRANSPORTATION, OFFICE OF.

WAR UTILITIES, Office of. See ELECTRIC LIGHT AND POWER under *Government*; WAR PRODUCTION BOARD.

WASHINGTON. A Pacific State. Area: 68,192 sq. mi. Population: 1,736,191 (1940 census); 1,843,104 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Arthur B. Langlie (Rep.), inaugurated in January, 1941, for a four-year term; Lieutenant Governor, Victor A. Meyers; Secretary of State, Mrs. Belle Reeves; Attorney General, Fred E. Lewis. See AQUEDUCTS; DAMS.

WATER SUPPLY AND PURIFICATION. Insuring adequate and safe supply of water is a problem for many cities, owing to normal growth of population and sudden increase by the establishment of new war industries, with consequent necessity of seeking new and more distant sources of supply. New communities and housing projects must also be supplied with water, meeting the requirements of the Federal Housing Administration. Several large cities supply smaller neighboring communities under varying forms of agreement. In Wisconsin, the State Public Service Commission ordered Milwaukee to supply an outlying area, but the city objected. The circuit court upheld the Commission, but the State Supreme Court held that the Commission had no power to order the munic-

ipally owned utility to serve customers outside the city limits; but it also held that a community taking water from a city is free to resell the water to another community. In large cities, the average resident pays monthly 97 cents for water service and uses 5,000 gals.

Conservation of present supply may avoid or postpone the provision of an additional source. Systematic stopping of leaks in pipes, pumps, plumbing, and meters is an important step. At Philadelphia, a water-waste survey detected 988 leaks totaling a loss of some 20-million gallons daily, equivalent to a saving of 33 tons of coal daily for pumping. A similar study at Allentown, Pa., avoided the great expense of an additional supply to meet increased consumption following industrial expansion. At army posts, the results of such surveys have exceeded expectation. Other means of insuring full use of the supply available include: cleaning mains, metering, elevated storage instead of direct pumping, elimination of flush tanks and improvements in the distribution system.

In many cases, however, additional supply is essential. Surveys have been made to relieve Denver by diverting the Blue River into the Platte River, from which the city draws its supply. The increased supply would be used partly for irrigation. At Rochester, N.Y., an 8-mile conduit from Hemlock Lake, abandoned in 1935, was reconditioned to increase the reserve capacity. To guard against possible sabotage of the present supply system of New York, a 42-mile length of the 85-mile tunnel to the Delaware River was put in service to bring water from areas which already serve the Croton and Catskill aqueducts. Several cities in war zones in New York State have co-operated for mutual aid by interconnecting their water systems and pooling stocks of material and equipment.

A typical situation in water shortage is at Baltimore, Md., where demand on the existing Gunpowder River supply is nearing the danger point, as a result of increased population and war industries. The citizens defeated a proposed bond issue of \$32,000,000 for a new supply, and as an emergency measure a loan of \$12,500,000 was secured for obtaining 40,000,000 gal. daily from the north branch of the Patapsco River. This will be pumped through a 60-in. concrete pressure pipe, against 250 ft. head, to a 6,000,000-gal. sedimentation basin. Thence it will flow by gravity to the filtration plant, 12 miles across the city, through 7½ miles of 48-in. concrete pipe and 4½ miles of tunnel lined with 7-ft. concrete pressure pipe. Contract has been let for a 4½-mile tunnel from Lake Ashburton to the existing filtration plant. This loan will also provide for securing the necessary property for a future dam and reservoir ten miles further upstream, with new filtration plant. The cost of this proposed permanent project will be about \$23,000,000.

A critical situation as to inadequate supply at both Detroit (Highland Park) and Philadelphia led to an unusual cooperation. The latter had been obliged to defer a much needed \$18,000,000 project for new pumps and treating facilities, but had been granted emergency priority for new pumps to handle filtered water at the Lardner's Point plant. At Highland Park, having the largest defense plants in the Detroit district, there was serious lack of pumping capacity, but new pumps were not obtainable. By a lend-lease agreement, Philadelphia loaned to Detroit for four months four electrically driven pumps of 40,000,000 gal. daily capacity, built for Lardner's Point station.

Increasing salt contamination of water from the Cape Fear River at Wilmington, N.C., has led to plans for a 30-mile conduit to a pumping station further upstream. But after contracts had been let, the War Production Board required a change to a temporary plan with intake only 8 miles upstream.

New steps have been taken in the old controversy over pollution of the southern end of Lake Michigan, where Chicago takes a supply for the south part of the city. The city has brought suit for injunction against the State of Indiana and a group of cities to stop the pollution due to sewage and industrial wastes. It is also seeking permission through Congress to increase its draft of water from the lake to 5,000 cubic feet from the present limit of 1,500 cubic feet per second. With increased flow from the lake through the Calumet River to the Chicago drainage canal, the pollution would not enter the lake. A proposed lock in this river, as in the Chicago River, would prevent floods from reversing the flow and carrying pollution into the lake. Such increased diversion is opposed strongly by other States bordering on the Great Lakes.

The great \$23,000,000 filtration plant at 79th St., Chicago, to serve the southern section of the city, is now 65 per cent completed, at a cost of \$13,000,000. Delays have been due to priority restrictions on machinery and equipment, but these have been relieved and it is expected that the plant will be completed in 1944. It will have a capacity of treating 320,000,000 gal. daily, serving a population of 1,250,000 in the city and 100,000 in suburban communities.

Army water stations at the end of 1942 totaled 1,044, of which 344 purchased their water, while the others had their own supplies; 144 had filtration plants. Of fixed army posts, 38 per cent purchased their water, 41 per cent had wells, and 21 per cent had surface supplies. Waste-prevention methods reduced the daily consumption from 102 to 70 gallons per capita.

Because of war conditions and the drafting of men into the army, maintenance of municipal plants has slackened, so that when conditions improve there will be need of heavy repair and replacement. Recruiting and training of auxiliary and volunteer personnel has become necessary, to insure fair maintenance and safe operation of treatment works. For assistance in promoting postwar projects, the American Water Works Association and similar organizations have formed a joint committee to work with local authorities in appraisal of needs, selection of methods of treatment, preparation of plans and making financial arrangements. It is urged that such preliminaries should be dealt with now, so that projects may be ready for construction as soon as the war is over. Furthermore, it is considered that planning and financing should be handled by the communities concerned.

Water purification has not been affected materially by war conditions, according to a report of the American Society of Civil Engineers, except in delay of improvements at a few cities. As a rule, the supply of chemicals has been sufficient. There remains a tendency toward a higher degree of chlorination for removal of bacteria. A subsequent ammonia treatment for dechlorination is being tried, but appears to be no more effective and to give no better taste than straight chlorine. Experimental work has been continued. Removal of manganese from water has been necessary at some Illinois towns, as it causes brown spots in laundered goods. Removal is effected mainly by the use of chlorine.

For control of tastes and odors in water, activated carbon is used in about a dozen municipal plants and several army posts. Of 5,372 treatment plants serving 62,500,000 people, 50 per cent (serving 19,400,000) use chlorination as the principal treatment, supplemented in many cases by aeration, sedimentation, or coagulation. About 138 plants (serving 500,000) employ some other treatment than filtration and do not use chlorine. Supervision and treatment of water for military posts and training camps has been effective in maintaining a high degree of health among the soldiers. On the other hand, study of the epidemic of poliomyelitis showed that ordinary methods of water purification (coagulation, sedimentation, filtration, and aeration) do not effect complete removal of the virus, but that ultra-violet irradiation is more effective than any other method.

One remarkable development is the rendering of sea-water safe for drinking by means of certain chemicals. Records of disasters at sea have many instances of wrecked men in boats dying from the use of sea-water to quench intolerable thirst. Compressed cakes of the material are carried on ships' rafts and life boats.

Of 1,279 communities in Canada having water works, 482 have populations under 500. For improvement and expansion of the water system at Cuernavaca, Mexico, the city has a government loan of \$225,000, and other projects are under consideration in that country. At Pretoria, South Africa, a great increase in consumption due to war developments has caused a shortage, which is being made good by temporary measures, the planned new supply from the Vaal River being deferred until after the war. At Port Elizabeth, South Africa, the war shut off the supply of steel pipe to reach a new source, but temporary relief is to be afforded by tapping a natural reservoir formed by a deep hole or sump in the Kromma River. Retreating German forces in Tunisia poisoned water sources, but the technical corps of the Allied forces tested all wells and purified water for the troops by means of mobile chemical units.

See AQUEDUCTS; DAMS; GEOLOGICAL SURVEY; SANITATION.

E. E. RUSSELL TRATMAN.

WATERWAYS, Inland. The opening, in July, 1943, of the new MacArthur lock at Sault Sainte Marie, Mich., in the canal connecting Lake Superior with the lower lakes, was the most important event of the year in the inland navigation system of the United States. The enormous traffic through this canal, amounting to 178,600,000 tons in 1942, of which iron ore was 92,000,000 tons (and estimated at 86,500,000 tons for 1943) demands special facilities, especially as navigation is closed usually by ice for four or five months. There are now four parallel locks in this canal, overcoming a difference of 22 ft. in water level. A lock built by the State of Michigan in 1855 was 250 x 60 ft., and was supplemented in 1881 by the first Federal lock, Weitzel lock, 515 x 80 ft. In 1896, the Poe lock, 800 x 100 ft., was built on the site of the State lock; the Davis lock, 1,350 x 80 ft., followed in 1914, and the Sabin lock, of the same size, in 1919. Then in 1943 came the MacArthur lock, 800 x 80 ft., built on the site of the Weitzel lock, with 31 ft. of water on the gate sills.

While traffic on the inland waterways has increased generally under war conditions, to relieve or supplement the heavily burdened railways, the service is principally for bulk freight and the movement is necessarily slow. Rivers and the Great

Lakes constitute by far the greater proportion of these waterways, with only a relatively small mileage of canals. On that part of the New York State Canals connecting the Hudson River with Lake Ontario, the channel between locks has been deepened to 14 ft. and widened to a bottom width of 104 ft. in earth and 120 ft. in rock. Raising 28 bridges to give a clearance of 20 ft. above the water is deferred until after the war.

To open navigation earlier than usual, ice-breakers were used on the Upper Mississippi (St. Louis to St. Paul), the Illinois Waterway (Lake Michigan to the Mississippi), the canal at Sault Sainte Marie, and the Straits of Mackinac. There are projects for deepening the channel in the Mississippi from Cairo to Baton Rouge, 345 miles, and for a ship canal practically parallel with the river from New Orleans to the sea, about 70 miles. On the system of waterways operated by the government-owned Inland Waterways Corporation (which includes the Mississippi River and several tributaries), the freight handled in 1942 totaled 306,333 tons; this was a decrease of nearly 12 per cent from 1941, due in part to the stoppage of ocean shipments from New Orleans. New types of equipment are appearing, with oil-engined twin-screw and triple-screw towboats displacing the typical river boats, with their lofty superstructures, tall smokestacks and huge stern or side wheels.

On the Intracoastal Waterways, formed by dredging and connecting lagoons which parallel the coast line, a minimum channel depth of 12 ft. has been made available by the Corps of Engineers, U.S. Army, throughout the Atlantic section, from Trenton, N.J., to Jacksonville, Fla. On the Gulf Coast section, work is in progress in widening and providing a depth of 12 ft., from Carrabelle, Fla., to Corpus Christi, Texas. This section will be extended to the Rio Grande, the Mexican boundary, after the war.

With the completion of its Kentucky dam and lock in 1944, the Tennessee Valley Authority will open 9-ft. navigation on the Tennessee River, from the Ohio to Knoxville. In this distance of 650 miles a rise of 500 ft. will be effected by locks in ten dams. Two of the locks are 600 x 110 ft., and the others 360 x 60 ft. Of wharves or landings at several cities, the TVA has built three. Since the construction of the lock in the government dam at Bonneville, on the Columbia River, the old locks at the Cascades are no longer required, and the iron gates have been removed for addition to the war-service scrap pile. The highly controversial project for a dam and power plant in the St. Lawrence, with locks to enable ocean steamers to reach the Great Lakes, is still kept alive, although generally admitted to be for postwar consideration.

Indefinite projects have been proposed for dredging and connecting South American rivers to provide a system of inland navigation. There are possibilities, but neither commercial nor financial conditions are favorable to such developments. It may be noted that in the great basin of the Amazon River, ocean steamers of 8,000 tons can reach Manaus (Brazil), 1,000 miles from the coast, while those of 3,000 tons can go 1,000 miles further upstream to Iquitos (Peru).

Inland navigation in China is now controlled by a Japanese concern, the Central China Development Co., which operates over some 37,000 miles and is reported as building new links in its system of rivers and canals. In England, the traffic on barge canals is increasing, but an obstacle to through traffic is in the varying sizes of the canals and locks. A plan has been put forward for extend-

ing the Manchester Ship Canal eastward to the Humber River, which discharges into the North Sea at Hull. In Ireland, the severe reductions in railway service have led to the revival of some abandoned canals, using 50-ton barges and tugs.

See DAMS; FLOOD CONTROL; IRON ORE; PORTS AND HARBORS; STATE LEGISLATION; VENEZUELA under *History*.

E. E. RUSSELL TRATMAN.

WAVES. See SELECTIVE SERVICE SYSTEM.

WEALTH TAX. See TURKEY under *History*.

WEAPONS. See MILITARY PROGRESS. Compare MUNITIONS.

WEATHER, WEATHER BUREAU. See METEOROLOGY.

WEIGHTS AND MEASURES. See NATIONAL BUREAU OF STANDARDS.

WELDING. See ELECTRICAL INDUSTRIES; MACHINE BUILDING; SHIPBUILDING.

WELFARE WORK. See ARMED FORCES.

WESTERN AUSTRALIA. See AUSTRALIA.

WEST VIRGINIA. A south Atlantic State. Area: 24,-181 sq. mi. Population: 1,901,974 (1940 census); 1,742,705 (nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Matthew M. Neely (Dem.), inaugurated in January, 1941, for a four-year term; Secretary of State, William S. O'Brien; Attorney General, Ira J. Partlow. See FLOODS.

WHEAT. The wheat crop in the United States in 1943 was estimated by the U.S. Department of Agriculture at 836,298,000 bu., about 14 per cent less than the 1942 crop of 974,176,000 bu., but 13 per cent greater than the 1932-41 average of 738,412,000 bu. The total area harvested in 1943, 50,554,000 acres, compared with 49,200,000 acres

in 1942 and the 10-year average of 54,572,000 acres. In the main, weather was reasonably favorable to the wheat crop. The loss of planted acreage was considerably less than average and yields well above the average. The yield per acre averaged 16.5 bu. in 1943 compared to 19.8 bu. in 1942 and 18.5 bu. for 1932-41. Acreages harvested, average acre yields, and total production, respectively, were for winter wheat 33,952,000 acres, 15.6 bu., 529,606,000 bu.; durum 2,130,000 acres, 17 bu., 36,204,000 bu.; and other spring wheat 14,472,000 acres, 18.7 bu., 270,488,000 bu.

Preliminary statements placed the season average price per bushel received by farmers at \$1.329 and the value of production at \$1,111,039,000 versus \$1.098 and \$1,069,982,000 in 1942. The accompanying table lists the leading wheat States in 1943. See INSECT PESTS.

WHISKEY. See LIQUOR INDUSTRY.

WHITE HOUSE OFFICE. A division of the Executive Office of the President, which serves the President in the performance of detailed activities incident to his office. The officials include three Secretaries, Stephen Early, Maj. Gen. Edwin M. Watson, and Marvin H. McIntyre; four Administrative Assistants (personal aides), William H. McReynolds, who serves as Liaison Officer for Personnel Management, Lauchlin Currie, Lowell Mellett, and David K. Niles; Special Assistant Harry L. Hopkins; Special Executive Assistant, Eugene Casey; Personal Secretary, Grace G. Tully; Executive Clerk, Rudolph Forster.

WHITE PINE BLISTER RUST. See INSECT PESTS.

WHITE PLAN. See POSTWAR PLANNING under *International*.

WHITE RUSSIAN SOVIET SOCIALIST REPUBLIC. See UNION OF SOVIET SOCIALIST REPUBLICS under *Area and Population*.

WHITE SLAVE TRAFFIC. See FEDERAL BUREAU OF INVESTIGATION.

WHITNEY MUSEUM. See ART under *Art Museums*.

WHOLESALE TRADE. See BUSINESS REVIEW.

WILDLIFE, WILDLIFE CONSERVATION. See FISH AND WILDLIFE SERVICE.

WINDWARD ISLANDS. A group of four British West Indian colonies listed in the accompanying table.

Colony (Capital)	Sq. mi.	Pop. (1940)
Dominica (Roseau).....	304	52,739
Grenada (St. George's).....	133 ^a	90,085
St. Lucia (Castries).....	233	71,222
St. Vincent (Kingstown).....	150 ^b	60,000
Windward Islands (St. George's) ..	820	274,046

^a Includes the islands—Carriacou, etc.—of the southern Grenadines (13 sq. mi.). ^b Includes the islands—Bequia, Canouan, Mayreau Mustique, and Union—of the northern Grenadines (17 sq. mi.).

Chief towns: St. George's (capital), 6,500 inhabitants in 1939; Castries with suburbs, 21,124; Kingstown, 4,269 (1921); Roseau, 9,000.

Production and Trade. The principal products are arrowroot, cotton, sugar, molasses, rum, copra, cocoa, peanuts, cassava, spices, citrus fruits, and vegetables. Trade: . Dominica, 1940, imports £114,284, exports £81,153; Grenada, 1939, imports £283,088, exports £310,687; St. Lucia, 1941, imports £362,285, exports £158,636; St. Vincent, 1941, imports £248,036, exports £283,565. In 1940 there were 1,216 miles of highways.

Finance. Dominica, 1940, revenue £80,702, expenditure £82,516, public debt £6,000; Grenada,

State	Value	Acres Harvested	Production (bushels)
N.D.....	\$198,861,000	8,209,000	154,156,000
Kan.....	190,398,000	10,159,000	144,241,000
Mont.....	92,175,000	3,449,000	74,335,000
Neb.....	81,509,000	2,948,000	61,285,000
Wash.....	65,100,000	1,970,000	51,667,000
Texas.....	46,548,000	3,306,000	36,366,000
S.D.....	41,674,000	2,931,000	32,057,000
Okl.....	40,907,000	3,338,000	31,711,000
Ohio.....	40,731,000	1,603,000	26,449,000
Colo.....	39,740,000	1,410,000	31,540,000
Idaho.....	28,627,000	837,000	22,720,000
Ill.....	24,895,000	1,018,000	16,821,000
Ore.....	24,375,000	728,000	19,500,000
Minn.....	23,951,000	1,102,000	18,008,000
Ind.....	23,216,000	955,000	15,274,000
Penn.....	20,556,000	790,000	13,435,000
Mo.....	18,215,000	973,000	12,649,000
Mich.....	17,466,000	681,000	11,196,000
Calif.....	12,232,000	538,000	8,436,000
Va.....	9,322,000	451,000	5,863,000
N.C.....	9,183,000	465,000	5,812,000
Md.....	7,763,000	289,000	4,913,000
N.Y.....	7,245,000	252,000	4,528,000
Utah.....	6,771,000	223,000	5,417,000
Tenn.....	6,421,000	343,000	4,116,000
Ky.....	5,931,000	289,000	3,902,000

1939, revenue £158,307, expenditure £173,685, public debt £357,837; St. Lucia, 1940, revenue £103,403, expenditure £115,662, public debt £104,681; St. Vincent, 1941, revenue £126,388, expenditure £111,708, public debt £91,629.

Government. There is one governor for all the four colonies but there is no common legislature and each colony has its own executive and legislative councils. Governor and Commander in Chief, Sir Arthur Grimble (app. Nov. 19, 1941).

WINTHROP COLLECTION. See ART under *Art Museums*.

WISCONSIN. An east north central State. Area: 56,154 sq. mi. Population: 3,137,587 (1940 census); 2,967,973 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. Acting Governor is Walter S. Goodland; Lieutenant Governor, Walter S. Goodland; Secretary of State, Fred R. Zimmerman; Attorney General, John E. Martin.

WITCOGUM. See RUBBER.

WLB. See NATIONAL WAR LABOR BOARD.

WOMEN IN INDUSTRY, WOMEN WORKERS. See CIVIL SERVICE COMMISSION; EDUCATION, U.S. OFFICE OF; LABOR CONDITIONS; WOMEN'S BUREAU; GERMANY, GREAT BRITAIN, and other belligerent countries, under *History*.

WOMEN'S AUXILIARIES. See COAST GUARD; SELECTIVE SERVICE SYSTEM.

WOMEN'S BUREAU. A bureau in the U.S. Department of Labor created by Congress to "formulate standards and policies which shall promote the welfare of wage-earning women, improve their working conditions, increase their efficiency, and advance their opportunities for profitable employment." Since the outbreak of hostilities the Bureau has channeled its resources and personnel into an investigation of working women's place in the war, with the object of disseminating widely the information secured concerning war occupations in which women may substitute for men, and work standards for their employment. Counseling services on women's employment problems have been made more easily available to employers, trade unions, and Federal and State authorities by the assignment of the various field investigators of the Bureau to regional offices with restricted areas, the 12 regions now covering the entire country. One of these regional representatives is its farm-labor authority.

The War and Navy Departments, the War Production Board, the War Manpower Commission, the Maritime Commission, and other governmental agencies and private organizations have called on the specialized knowledge and records in the pos-

session of the Bureau. Changes in industrial methods, such as job dilution, plus the obvious need for many more women in war production, caused the Bureau to make detailed field studies of occupations and practices in war plants. Following its 1942 surveys of aircraft, artillery ammunition, and other war industries, reports have been published on machine tools, cannon and small arms, and a State-wide survey of old-line plants with war contracts in New Jersey. Recommendations by the Bureau for women's employment in shipbuilding and naval repair, based on its survey of shipyards on the Atlantic and Pacific and Gulf coasts, are in preparation. A similar survey for the steel mills was completed in 1943 and the report is in progress. Data are constantly being compiled on women's employment in key war industries.

In addition to these surveys, special bulletins recommending standards for working conditions for women have been published. A timely bulletin on part-time employment of women was issued in 1943, giving the Bureau's recommendations for the employment of women unable to take full-time jobs. Factors directly affecting production and often the major cause of absenteeism and high turnover on the part of women workers have been studied by the Bureau in various war-industry areas, for example, shopping and marketing, child care, and other family problems, transportation difficulties, and housing for single women workers.

During the year the Bureau's advice was sought as to the relaxation of State hour laws and other legal standards for women's work. (See STATE LEGISLATION.) At a conference suggested and organized by the Bureau, called by the Secretary of Labor in March, 1943, to discuss the necessity and wisdom of such relaxation of laws, the labor officials from 12 industrial States in the East, and representatives of the War and Navy Departments and other Federal agencies, agreed that exceptions be approved only where temporary modification is shown to be necessary to insure maximum production. The conference went on record as continuing to endorse the best standards as to hours of employment—a maximum 48-hour week, and 8-hour day, 1 day of rest in 7, adequate rest and meal periods, adaptation of hours of work and working conditions to the age and sex of the workers, proper safeguards for health and safety, the same wage rates for women as for men. An example of the Bureau's activity in minimum-wage matters was reflected in the wage orders it helped to draft at the request of State administrators.

The principle of equal pay for women and men has been advocated by the Women's Bureau for many years, and the Bureau is examining the decisions of the National War Labor Board (q.v.) where action has been taken on "equal pay" to determine the effect of Board policy on wage rates for women. The Bureau is working also with unions to determine the practical application of such decision.

The Bureau's study of the legal status of women in the United States was brought up to date by the issuance of a pamphlet summarizing State legislation in this field that had been passed since 1938, the date of the earlier report.

Special articles on matters of current interest to women workers have been prepared for the monthly periodical of the U.S. Department of Labor, *The Labor Information Bulletin*. An informative collection of over a thousand photographs has been assembled by the Bureau, through the cooperation of employers, trade periodicals, and others. A number selected as especially good illustrations of wom-

en's jobs in this war period have been printed as a series of five posters (each containing 9 pictures) and are being widely distributed.

MARY ANDERSON.

WOOL. See **CHEMISTRY** under *Textiles*; **LIVING COSTS**; **TEXTILES**.

WORK LEAVES (for prisoners in war production). See **PRISONS**.

WORKMEN'S COMPENSATION. See **INSURANCE**; **LAW** under *Decisions Concerning the Federal System*; **STATE LEGISLATION**. Compare **INDUSTRIAL HEALTH AND SAFETY**.

WORK-OR-FIGHT ORDER. See **SELECTIVE SERVICE SYSTEM**; **UNITED STATES** under *Armed Forces and Manpower*.

WORK PROJECTS ADMINISTRATION (WPA). A U.S. agency under the jurisdiction of the Federal Works Agency, now in liquidation. For final report, see 1943 YEAR BOOK, pp. 758-9. See **ART** under *Discontinuance of Federal Activities*; **LIBRARY PROGRESS**; **MUSIC**; **PUERTO RICO** under *History*.

WORLD COURT. This agency, having some fifty States as members and drawing jurisdiction from 400-500 treaties, while ready at any time that the nations desired, remained to one side for the fourth year as governments sought to settle their conflicts by other means. The President and the Registrar, who had been driven by the Germans from the seat of the Court in The Hague following the occupation of the Netherlands, continued in office in Switzerland, with the other judges mostly on call in their own countries. Though the Court was thus forced into inaction, it became clear during the year that it was generally accepted as one of the foundation stones of the new world system; Secretary of State Cordell Hull, indeed, specifically raised the question of its adaptation to the new circumstances.

WORLD SERIES. See **BASEBALL**.

WORLD WAR. The military campaigns of the first years of the war are described in the YEAR BOOKS for 1939 and 1940 under **EUROPEAN WAR**, and in the 1942 and 1943 YEAR BOOKS under **WORLD WAR**. For the convenience of the reader, a war chronology, 1939-42, follows immediately. (See pp. xiv-xv for 1943 chronology.) Thereafter, the campaigns of 1943 are described.

1939

March 14—German and Hungarian troops invaded Czechoslovakia.

April 6—Prime Minister Chamberlain announced in the House of Commons a Polish-British agreement, bringing into existence a triple alliance—France, Great Britain, and Poland.

April 13—British Government guaranteed borders of Rumania and Greece. Similar assurances were given by France.

April 28—German note to Poland denounced the 10-year nonaggression treaty of January 26, 1934 between the two countries and requested the return of Danzig as well as an extraterritorial railway and highway connection to East Prussia.

August 23—German-U.S.S.R. nonaggression pact signed.

September 1—German troops invaded Poland; Danzig joined Germany.

September 3—Great Britain declared a state of war existed with Germany.

France declared a state of war existed with Germany.

September 16—Soviet troops invaded Poland.

September 28—German-U.S.S.R. border and friendship treaty signed, resulting in partitioning of Poland.

Estonian-U.S.S.R. 10-year mutual-assistance pact signed at Moscow: Gave U.S.S.R. bases for aviation and artillery.

October 3—Declaration of Panamá signed.

October 5—Latvian-U.S.S.R. 10-year mutual-assistance pact signed at Moscow.

October 10—Lithuanian-U.S.S.R. 15-year mutual-assistance treaty signed at Moscow.

October 19—Anglo-French-Turkish 15-year mutual-assistance pact signed at Ankara.

November 1—Polish Corridor, Posen, and Upper Silesia annexed by Germany.

November 3—U.S.S.R. incorporated Polish Western Ukraine and Western White Russia.

November 4—United States Neutrality Act of 1939 approved.

November 21—German-Slovak treaty signed at Berlin, ceding to Slovakia 225 square miles of territory annexed by Poland in 1920, 1924, and 1938.

November 30—Soviet troops invaded Finland.

1940

March 12—Soviet-Finnish peace treaty and protocol signed at Moscow.

April 8—Great Britain and France announced that three areas of Norwegian waters had been mined in the attempt to prevent shipment of Scandinavian ore to Germany.

April 9—German troops invaded Denmark.

Germany attacked Norway.

April 17—Secretary of State Hull issued a formal statement declaring any change in *status quo* "would be prejudicial to the cause of stability, peace, and security" in the entire Pacific Area.

May 9-10—Germany invaded Belgium, Luxembourg, and the Netherlands.

May 10—Winston Churchill became Prime Minister of Great Britain following resignation of Neville Chamberlain.

British occupation of Iceland announced in London.

May 15—The Netherlands Army surrendered.

May 19—Chancellor Hitler issued a proclamation decreeing the reincorporation into the Reich of Eupen, Malmédy, and Moresnet.

May 28—Belgian Army under King Leopold surrendered.

June 9—Norwegian high command ordered army to cease hostilities at midnight.

June 10—Italy declared war on Great Britain and France.

June 14—German troops entered Paris.

June 15—Soviet troops marched into Lithuania.

June 17—U.S.S.R. announced Estonia and Latvia had agreed to free passage of Soviet troops and to formation of new governments.

June 22—Franco-German armistice signed.

June 24—Franco-Italian armistice signed.

June 27—Rumania agreed to cede Bessarabia to U.S.S.R.

June 28—British Government recognized Gen. Charles de Gaulle as leader of group to maintain French resistance.

July 3—British sank or seized major part of French fleet.

July 5—French Government of Marshal Pétain broke off diplomatic relations with Great Britain as result of British attack on French warships at Oran.

July 18—British Prime Minister announced terms

of a temporary agreement for stoppage of war supplies to China through Burma and Hong Kong.

August 25—Estonia, Latvia, and Lithuania ratified U.S.S.R. incorporation.

September 2—United States—British notes on lease of British bases in return for 50 United States destroyers.

September 7—Bulgarian-Rumanian agreement ceding the Dobruja to Bulgaria signed at Craiova, Bulgaria.

September 22—Japanese-French agreement regarding concessions in Indo-China to Japan.

September 27—German-Italian-Japanese 10-year military-economic alliance pact signed at Berlin.

October 28—Italy attacked Greece prior to expiration of ultimatum, creating state of war.

November 4—Spanish incorporation of international zone of Tangier.

November 20—Hungary signed protocol of adherence to Axis tripartite pact at Vienna.

November 23—Rumania signed protocol of adherence to Axis tripartite pact at Vienna.

November 24—Slovakia signed protocol of adherence to Axis tripartite pact at Berlin.

November 26—Governor-General of Belgian Congo declared state of war with Italy.

November 30—Japanese peace treaty signed with the Wang Ching-wei regime at Nanking, China.

December 6—Japanese-Thai pact of amity signed.

December 12—Hungarian-Yugoslav treaty of friendship signed.

1941

January 5—British captured Bardia, Libya, and 25,000 Italians.

January 19—Axis began mass air attacks on Malta.

January 20—President Roosevelt was inaugurated for third term.

January 22—British captured Tobruk and 14,000 Italians.

January 25—Premier Antonescu crushed Iron Guard revolt in Rumania.

February 6—Bengasi, Cyrenaica, fell to British.

February 9—Vice Adm. Jean François Darlan became Vice Premier and Foreign Minister of Vichy France.

February 17—Bulgar-Turk nonaggression pact signed.

February 26—South Africans took Mogadiscio, capital of Italian Somaliland.

March 1—Bulgaria admitted German troops and signed Axis tripartite alliance.

March 11—President Roosevelt signed Lend-lease Bill.

March 24—Turkey and U.S.S.R. pledged neutrality in case either was attacked by a third power.

March 25—Prince Paul's Yugoslav regime adhered to Axis military alliance. Was overthrown by anti-Nazi coup March 27.

March 28—British Mediterranean fleet sank three Italian cruisers and two destroyers off Cape Matapan.

March 30—U.S. Government seized Axis ships in American ports to prevent sabotage.

April 1—British captured Asmara, capital of Eritrea.

April 3—Anti-British coup in Iraq placed Rashid Ali Al-Gailani and his pro-Nazi supporters in power.

April 6—Germans invaded Greece and Yugoslavia. South African troops entered Addis Ababa, Ethiopian capital.

April 9—United States undertook to protect Greenland for duration of war.

April 12—Axis troops recaptured Bardia, Libya.

April 13—Japan and Russia signed five-year neutrality pact.

April 17—Yugoslav army surrendered to Germans.

April 27—German forces entered Athens.

May 2-31—British troops ousted pro-Axis regime in Iraq.

May 6—Joseph Stalin replaced V. M. Molotov as Soviet Premier.

May 10—Rudolf Hess landed by parachute in Scotland carrying Hitler's offer of peace to British Government.

May 20—Italian Viceroy surrendered in Ethiopia with 38,000 men.

May 20-June 1—Germans captured Crete by air invasion.

May 24—British battle cruiser *Hood* was sunk by German battleship *Bismarck*, which was sunk in turn by British on May 27.

May 27—President Roosevelt proclaimed an unlimited national emergency.

June 8-July 9—British and Free French forces occupied Syria and Lebanon.

June 18—German-Turkish friendship and neutrality pact was signed.

June 22—Germany began surprise invasion of Russia.

June 26-27—Finland and Hungary joined Germany against Russia.

July 7—U.S. forces began joint occupation of Iceland with the British, who landed May 10, 1940.

July 12—British-Russian mutual assistance pact signed.

July 21—Stalin became Commander in Chief of Red Army.

July 26—Vichy Government signed agreement giving Japan military control over French Indo-China.

August 6—Germans captured Smolensk.

August 12—Britain and Russia agreed to assist Turkey if that country was attacked by Germany.

August 14—President Roosevelt and Prime Minister Churchill issued Atlantic Declaration (Charter) after meeting on warship off Newfoundland.

August 21—Russians destroyed the giant Dnieper Dam to prevent it from falling into German hands.

August 25—British and Russian forces began occupation of Iran.

September 11—President Roosevelt ordered U.S. Navy to shoot on sight against Axis raiders in "defensive waters."

September 27—Reinhard Heydrich, appointed Acting Reich Protector of Bohemia and Moravia, began reign of terror against the Czechs.

October 1—United States signed lend-lease agreement with Brazil.

October 3—Hitler announced that "Russia is already broken."

October 10—Germans took Taganrog from Russians. On October 14 Russians evacuated Vyazma.

October 18—Gen. Hideki Tojo formed Tokyo Cabinet pledged to "strong policy" towards United States and Britain.

October 20—Soviet Government moved to Kuibyshev as German drive neared Moscow. Kharkov fell on October 24.

October 30—U.S. destroyer *Reuben James* was sunk by Axis submarine on convoy duty west of Iceland.

November 17—U. S. Neutrality Act was amended to permit arming of merchant vessels and visits to belligerent ports.

November 18—British Eighth Army began new offensive in Libya.

November 25—Anti-Comintern Pact was renewed

in Berlin by thirteen Axis and pro-Axis powers.

December 3—Finns recaptured Hangö naval base from Russians.

December 6—Britain declared war on Finland, Rumania, and Hungary.

December 7—Japanese surprise air attack on Pearl Harbor extended the war to the entire Pacific area.

December 7-20—26 nations declared war on Japan (see table on p. 731).

December 8—Japanese took over International Settlement at Shanghai and occupied Thailand with Thai Government's consent.

December 9—Japanese sank British battleship *Prince of Wales* and battle cruiser *Repulse* near Singapore.

December 10—Japanese invasion of Philippines began.

December 11—Germany and Italy declared war on United States.

December 12—Japanese captured Guam.

December 16—Adm. Chester W. Nimitz replaced Adm. Husband E. Kimmel as Commander in Chief of U.S. Pacific Fleet.

December 21—Hitler assumed supreme command of German Army following reverses in Russia.

December 22—Churchill arrived in Washington; joint Anglo-American war machinery was established in ensuing conferences. Wake Island surrendered after heroic defense by U.S. Marines.

December 24—British recaptured Bengasi in Libya.

December 25—British announced fall of Hong Kong.

December 31—Red Army's first winter offensive gained ground on all fronts.

1942

January 1—United Nations Declaration signed in Washington.

January 2—Japanese captured Manila and Cavite naval base.

January 5—Chinese won third battle of Changsha, claiming 52,000 Japanese casualties.

January 11—Japanese invasion of Netherlands East Indies began. On January 15 Burma invasion was launched.

January 15-28—American Foreign Ministers adopted anti-Axis program at Rio de Janeiro Conference.

January 16—U.S. War Production Board established.

January 21—Field Marshal Erwin Rommel launched new offensive against British in Libya.

January 23-28—Allied ships and planes sank or damaged 38 ships of Japanese invasion fleet in Straits of Macassar.

Japanese landed in New Guinea and New Britain.

January 26—U.S. expeditionary force landed in Northern Ireland.

February 7—Japanese captured Amboina, N.E.I. naval base.

February 9—French liner *Normandie* was gutted and overturned by fire at New York City pier.

February 15—Singapore capitulated to Japanese.

February 23—Red Army entered Kharkov and launched new offensive in central Russian front.

February 27-30—Japanese defeated Allied naval forces in Java Sea; began land invasion of Java.

March 6—Batavia, Java, captured by Japanese. On March 9 they announced surrender of 98,000 Allied troops.

March 8—British evacuated Rangoon.

March 13—Japanese landed in British Solomon Islands.

March 17—Gen. Douglas MacArthur arrived in

Australia from Philippines to assume command of Allied forces in Southwestern Pacific.

March 26—Japanese captured Akyab in western Burma.

April 5-10—Japanese aircraft attacked Colombo, Ceylon, and ports in Madras Province of India; sank two British cruisers and aircraft carrier *Hermes* in Bay of Bengal.

April 9—35,000 U.S. and Filipino troops on Bataan Peninsula surrendered after 98-day siege.

April 18—Tokyo and other Japanese cities were bombed by U.S. planes.

April 30-May 1—Japanese captured Mandalay and Lashio, terminus of Burma Road.

May 4-8—U.S. task force turned back strong Japanese thrust toward Australia in Battle of Coral Sea.

May 5—British attacked and captured Vichy French naval base of Diego Suarez in Madagascar to forestall Japanese landing.

May 11-24—Germans drove Russians from Kerch Peninsula in eastern Crimea.

May 26—Twenty-year Anglo-Russian alliance signed.

May 30—R.A.F. struck Cologne in one of a series of heavy attacks on Rhineland cities.

June 4-7—Japanese fleets were repulsed with heavy losses in Battle of Midway.

June 18—Prime Minister Churchill and staff arrived in Washington for further Anglo-American conferences.

June 21—Marshal Rommel captured Tobruk with 25,000 British troops and drove eastward into Egypt until halted at El Alamein on July 1.

June 25—Maj. Gen. Dwight D. Eisenhower arrived in London to assume command of U.S. forces in European theater.

July 2—Germans captured Sevastopol after 245-day siege.

July 4—American air units participated in their first bombing raid upon Axis Europe.

July 7—German summer offensive in Russia made further progress with crossing of the Don River.

July 20—Russians admitted loss of Voroshilovgrad. Their withdrawal from Rostov was announced July 28.

August 7—U.S. Marines checked Japanese advance in Southwest Pacific by landings on Tulagi and Guadalcanal in the British Solomon Islands.

August 9—British arrested Mohandas K. Gandhi and 200 of his followers after Gandhi started a civil disobedience campaign to drive British from India.

Two American and one Australian heavy cruisers were lost in night battle off Tulagi.

Germans took the Maikop oil fields in the Russian Caucasus.

August 17—Flying Fortresses attacked Rouen, Dunkirk, and Cherbourg in first all-American raid on Axis bases in Europe.

August 18—Gen. Sir Harold Alexander replaced Gen. Sir Claude Auchinleck as British Commander in Chief in the Middle East.

August 19—Canadian, British, and U.S. forces made a large-scale commando raid on Dieppe, France; half of the attacking force was lost.

September 6—British Eighth Army under Gen. Sir Bernard Montgomery repulsed Rommel's effort to break the El Alamein defense line in Egypt.

September 7—Germans began their frontal attack upon Stalingrad.

September 12—Russians were driven from their Black Sea naval base at Novorossiisk.

September 15—U.S. aircraft carrier *Wasp* was lost in Southwest Pacific.

October 3—U.S. Army announced occupation of Andreanof Islands in the Aleutians.

October 11—U.S. naval task force repulsed Japanese effort to reinforce their Guadalcanal garrison in first of a series of heavy night engagements. Another night sea battle, very costly to the Japanese, followed on October 26.

October 24—R.A.F. bombers struck Milan in series of heavy daylight raids on cities of N. Italy.

November 2—Marshal Rommel's forces began retreat from Egypt after their defeat in ten-day battle of El Alamein.

November 5—Vichy French forces capitulated to British in Madagascar.

November 8—Anglo-American expeditionary forces landed in Algeria and French Morocco. On November 10 Adm. François Darlan ordered end of French resistance and threw in his lot with the Allies.

November 11—Germans occupied southern France.

November 13-15—U.S. naval forces destroyed 28 Japanese ships and lost two cruisers and seven destroyers, with two admirals, in three-day battle off the Solomons.

November 17—General MacArthur landed in New Guinea to direct Allied offensive against Buna and Gona.

November 20—British recaptured Bengasi for third time in drive that ended Axis control of Libya.

November 22—Russians announced beginning of counter-offensive against German forces besieging Stalingrad.

November 27—Greater part of French fleet at Toulon was scuttled or burned by crews to prevent capture by Germans.

December 1—U.S. naval forces smashed final Japanese effort to reinforce their weakened garrison on Guadalcanal.

December 4-5—German counter-offensive in Tunisia drove Allies from Tebourba and Djedeida.

December 19—British and Indian forces began drive into Arakan peninsula of western Burma.

December 24—Admiral Darlan was assassinated in Algiers.

December 25—Russians launched counter-offensive against Germans in the Nalchik area of the Caucasus.

December 30—Russians encircled 22 German and Rumanian divisions before Stalingrad and recaptured Kotelnikov.

For the campaigns of 1943, see below.

THE RUSSIAN FRONT

The Tide Turned at Stalingrad. It is increasingly apparent that Nov. 19, 1942, was the turning point of the Second World War. Two Russian offensives began on that day which eventually encircled and captured the great German army which was besieging Stalingrad. For a month the Germans were able to maintain contact with the West, through a constantly narrowing salient, but on Jan. 1, 1943, 22 divisions were tightly encircled. By that time the Russian winter drive had already netted 312,000 enemy troops killed or captured.

On January 17 the survivors at Stalingrad were estimated at 80,000 out of a probable 220,000 entrapped. But on the 31st, when Field Marshal Gen. Frederick von Paulus and 16 other generals surrendered, the estimate of Germans eliminated in the Stalingrad trap rose to 330,000 men, most of whom were killed.

This disaster was an incredible event to Hitler. Posing as the supreme German general he had driven his armies through the depths of Southern Russia to the Volga. There they had destroyed a

great modern city, with artillery fire and thousands of bombs; they had even occupied much of the ruins repeatedly only to be driven out time and again by a Russian garrison which had literally destroyed its bridges over the Volga to the rear. Even when his defeat was already accomplished Hitler announced that Stalingrad was practically taken. His armies were indeed beyond Stalingrad in the Caucasus far to the South. They had seized the small Maikop oil fields, were very close to the larger Grozny wells, and just beyond lay the greatest oil wealth of the Soviet Union. Great success was so near that Der Fuehrer thought it was achieved.

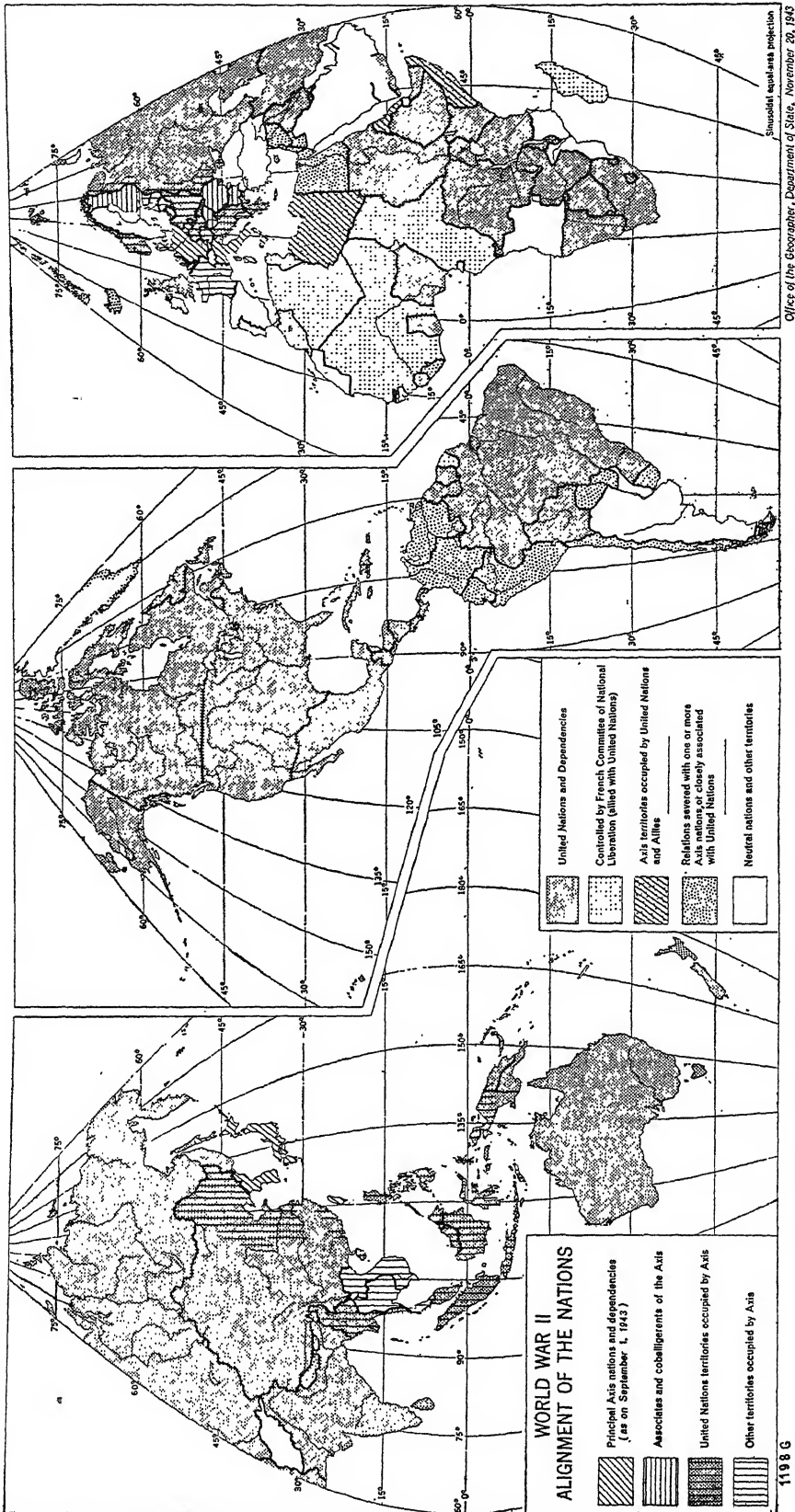
Warned by the terrible rigors of the Russian winter of 1941-42, and by their inability to destroy the Russian armies, the Germans had compromised with destiny enough to carve out for themselves the richest part of European Russia, almost exactly the same vast realm which they had seized by the Treaty of Brest-Litovsk on Mar. 3, 1918. That forgotten treaty which, in Churchill's words, had stripped Russia of all the conquests of Peter and Catherine "by one sabre-cut across the map of Europe from Helsingfors to Batum and Baku," was about to be made good in 1942 when the Russians unleashed their second winter offensive.

The Russian Winter Campaign. The Nazis were substantially where Stalin had expected them to be, and he was prepared to deal with them, partly by American-British lend-lease aid which may have supplied the margin of victory, but more largely by the herculean transfer and production of Soviet war factories. Throughout the long summer of retreat in the South the Russians had clung to the pivot at Voronezh. Finally, on Dec. 20, 1942, Russian forces poured through the pivot and had soon opened a wide breach on the long German flank. On January 2 they captured and wiped out the entire garrison of Velikiye Luki, a powerful bastion which formed with Rzhev and Vyazma a very strong triangle. The Red army had been in the center of the triangle all summer, but unable to take its strong points.

On January 10 eight Russian armies or groups of armies were on the move, and the Germans were everywhere on the defensive. By this time the Russians were within 60 miles of Rostov from the north and their troops had driven down to Georgievsk in the Caucasus, 112 miles in 18 days. Goebbels complained of the effectiveness of the Russian total war system and as gloom spread in Germany he decided to exploit it by three days of national mourning, February 4-7, to mark the end of German resistance at Stalingrad.

On February 5 the Germans in the Western Caucasus were cut off from Rostov by a Russian drive to the Black Sea. Some 200,000 Germans were cornered, except for the exit to the Crimea over the narrow Kerch peninsula. Coming up from the South the Red Army soon cleared the South bank of the Don at Rostov. North of that city Russian forces on skis and motorized sleds pushed steadily forward over the deep snow fields of the Donets valley, taking Kursk, the northern pivot of the German defense line on the 8th. This citadel had been a main bastion of Germany's winter line all through the preceding year.

The next day Belgorod fell and on February 16 Kharkov was taken, after being in German hands for 15 months. Eight railroads radiated from this king-pin of the Nazi line. Rostov was occupied the same day, along with Krasnodar in the West Caucasus. Krasnograd and Pavlodar, two important rail junctions south of Kharkov, were reclaimed on



NATIONS AT WAR AND THOSE WHICH HAD SEVERED DIPLOMATIC RELATIONS AS OF DEC. 31, 1943

(*Belligerents and Dates of Outbreak of War Are Shown in Bold-face. Nonbelligerents and Dates of Seseurance of Diplomatic or Consular Relations Are Shown in Light-faced. Blank Space Indicates that no Diplomatic or Consular Relations Existed at the Outbreak of War.*)

UNITED NATIONS ^b	Bulgaria	Finland	AXIS Germany	Hungary	POWERS ^a Italy ^c	Japan ^d	Rumania	Thailand	Vichy France
Australia	1/6/42	12/8/41	9/3/39	12/8/41	6/11/40	12/8/41	12/8/41	3/2/42	12/2/42
Belgium ^a	3/4/41	6/24/41	5/10/40	4/2/41	11/21/40	12/20/41	2/12/41	Lapsed Dec. 41	9/5/40
Bolivia			4/7/43		4/7/43	4/7/43			In rela- tions
Brazil		In rela- tions	8/22/42	5/2/42	8/22/42	1/28/42	3/6/42		11/13/42
Canada		12/7/41	9/10/39	12/7/41	6/10/40	12/7/41	12/7/41	1/14/42	11/9/42
China			12/9/41		12/9/41	12/9/41	Aug. 41		8/1/43
Colombia			11/27/43		12/19/41	12/8/41			11/26/42
Costa Rica			12/11/41	5/15/42	12/11/41	12/8/41	5/15/42		In rela- tions
Cuba			12/11/41		12/11/41	12/9/41			11/9/42
Czechoslovakia ^a	12/16/41	12/16/41	3/15/39	3/23/39	12/16/41	12/9/41	12/16/41		
Dominican Rep.			12/11/41		12/11/41	12/8/41			11/12/42
El Salvador		In rela- tions	12/12/41		12/12/41	12/8/41			11/13/42
Ethiopia			12/1/42		12/1/42	12/1/42			
France ^f			9/3/39		6/11/40	12/8/41			
Great Britain	12/13/41	12/7/41	9/3/39	12/7/41	6/11/40	12/7/41	12/7/41	1/25/42	7/5/40
Greece	4/24/41		4/6/41	6/20/41	10/28/40	12/7/41	6/24/41		7/1/42
Guatemala	In rela- tions	In rela- tions	12/11/41	In rela- tions	12/11/41	12/8/41	In rela- tions		11/12/42
Haiti	12/24/41		12/12/41	12/24/41	12/12/41	12/8/41	12/24/41		11/10/42
Honduras			12/13/41	12/13/41	12/13/41	12/8/41			11/13/42
India	12/13/41	12/7/41	9/3/39	12/7/41	6/11/40	12/7/41	12/7/41	1/25/42	7/5/40
Iran	9/1/41	9/1/41	9/9/43	9/9/41	9/9/41	4/12/42	9/9/41		2/5/42
Iraq			1/16/43		1/16/43	1/16/43			11/16/41
Luxembourg			5/10/40	4/2/41	11/21/40	12/8/41			9/5/40
Mexico	12/20/41		5/22/42	12/19/41	5/22/42	5/22/42			11/9/42
Netherlands ^a	3/4/41	6/28/41	5/10/40	4/8/41	12/11/41	12/8/41	2/11/41	12/9/41	9/5/40
New Zealand	12/13/41	12/7/41	9/3/39	12/7/41	6/11/40	12/8/41	12/7/41	1/25/42	11/17/42
Nicaragua	12/19/41		12/11/41	12/19/41	12/11/41	12/8/41	12/19/41		11/10/42
Norway ^a	2/20/41	12/7/41	4/9/40	Lapsed	6/11/40	12/9/41	2/20/41	5/6/42	9/5/40
Panama	12/7/41	In rela- tions	12/12/41	12/7/41	12/12/41	12/7/41	12/7/41		11/13/42
Philippines	12/13/41	In rela- tions	12/11/41	12/13/41	12/11/41	12/7/41	12/12/41	1/25/42	11/9/42
Poland	3/4/41	6/24/41	9/1/39	1/1/41	6/11/40	12/11/41	11/5/40		9/23/40
South Africa, U. of	12/13/41	12/8/41	9/6/39	12/8/41	6/11/40	12/8/41	12/8/41	1/25/42	4/23/42
United States	12/13/41	In rela- tions	12/11/41	12/12/41	12/11/41	12/7/41	12/12/41	1/25/42	11/8/42
U.S.S.R.	In rela- tions	6/25/41	6/22/41	6/27/41	6/22/41	In rela- tions	6/22/41		6/30/41
Yugoslavia	4/6/41	8/22/41	4/6/41	4/10/41	4/6/41	12/7/41	5/9/41		8/22/41
<i>Nonbelligerents ^b</i>									
Chile	5/18/43		1/20/43	5/18/43	1/20/43	1/20/43	5/18/43		5/18/43
Ecuador			1/29/42		1/29/42	1/29/42			11/27/42
Egypt	1/5/42	1/5/42	9/3/39	12/15/41	6/12/40	12/9/41	12/15/41		1/6/42
Paraguay	In rela- tions	In rela- tions	1/28/42	5/2/42	1/28/42	1/28/42	In rela- tions		In rela- tions
Peru	In rela- tions	In rela- tions	1/24/42	In rela- tions	1/24/42	1/24/42	1/26/42		11/29/42
Saudi Arabia			Lapsed 9/11/39		Lapsed 2/22/42				In rela- tions
Uruguay		In rela- tions	1/25/42	5/4/42	1/25/42	1/25/42	In rela- tions		5/12/43
Venezuela		Lapsed 9/9/40	12/31/41		12/31/41	12/31/41			11/27/42

^a In addition to the countries listed here, the Axis Powers included the puppet governments of Burma, Croatia, Manchukuo, Slovakia, and the Nanking regime in China. Denmark, which was occupied by German armed forces on Apr. 9, 1940, severed diplomatic relations with Belgium July 15, 1940, Netherlands May 10, 1940, Norway July 15, 1940, and the U.S.S.R. June 25, 1941.

^b The United Nations Declaration of Jan. 1, 1942, was signed by 32 belligerent governments and adhered to by the Fighting French National Committee and representatives of unofficial groups of Austrians, Danes, and other nationalities seeking freedom from Axis domination.

^c The Badoglio Government of Italy following an armistice with the Allied Powers declared war on Germany Oct. 13, 1943.

^d Japan's declaration of war, Dec. 7, 1941, against "the British

Empire," presumably included India and the Dominions. ^e On Dec. 16, 1941, the Czechoslovak Government declared war on all countries at war with Great Britain, the United States, and the Soviet Union; it announced that a state of war was considered to have existed with Germany and Hungary since the dates of their invasion of Czechoslovak territory.

^f The Fighting French National Committee, headed by Gen. Charles de Gaulle, and the Darlan-Giraud regime in North Africa (established Nov. 12, 1942) were merged on June 3, 1943, under the title of the French Committee of National Liberation.

^g Mexico's declaration of a state of war was announced on June 1, 1942.

^h The nonbelligerents listed below displayed their solidarity with the United Nations by suspending diplomatic or consular relations with Axis Powers, or allowing them to lapse.

the 20th but by the 27th the spring thaws were beginning at the southern end of the long battle line.

Shifting to the north the Russian high command started a new drive south of Lake Ilmen, on March 1, and two days later Rzhev, a central front stronghold, was reclaimed with much booty. On the 6th, the Soviet forces captured Gzhetsk, the "hedgehog" nearest to Moscow, 100 miles west. By defending strongholds with fortified spines radiating out in all directions the Germans had created a problem which the Russians could not solve in

the preceding winter. Now, however, they had amassed their unsurpassed artillery and perfected tactics which overcame the hedgehog strongholds. Growing air power also aided them. Vyazma, an important town on the Moscow railway to Smolensk, was captured March 12. Progress continued until the Russians were less than 50 miles from Smolensk at the end of March.

German Counter Offensive Recovers Kharkov. Meanwhile a serious reverse befell them in the south. There the Russian lines of communication and forces had been stretched too thin. The Axis had

460 divisions in Europe to 335 on the Allied side and of the latter at least 50 were in Britain. Heavy German counter-attacks began in the south at the end of February, supported by a force of 375,000 men. In the next ten days the Russians were thrown back 80 miles on the Kharkov-Dnieper-Donets front. They barely managed to prevent the encirclement of Kharkov but lost it to frontal assault on March 14. On the 22nd the Germans re-occupied Belgorod, 50 miles north of Kharkov, before the advancing thaws stopped all major activity in Russia. The Russian reverses sharpened the Russian cry for a second Allied front in Western Europe, a demand which was repeated forcibly on June 22, the second anniversary of the German invasion.

The Russians were not ungrateful for our extensive lend-lease aid—delivered to the Arctic north after grueling battles with submarines, planes, and bitter cold—as our Ambassador Admiral Standley seems to have thought in chiding them for not saying more about it. By spring our supplies were glutting the southern artery to Russia through Iran. Essentially landlocked, the Russians did not visualize well the immensity of the effort we were making on the sea and in the air over Germany. Absorbed in the interminable shock of battle with Germans, nothing seemed to them to balance the fact that on the Allied side they were paying the cost of victory in terms of blood.

German Summer Offensive at Kursk. During June there were heavy air raids along the Russian front. On the 12th the Germans aimed two mass air raids at Gorki on the upper Volga. The Russians countered with heavy blows on Nazi airdromes and communications, one 700-plane night raid being staged. Each side was trying to break up the other's concentrations for an offensive.

On July 7 the usual German summer offensive began, but only against the relatively small Kursk salient. In 1941 they had attacked from the Baltic to the Black Sea. In 1942 they attacked on the southern half of the line. In 1943 they could attempt only a local offensive.

It was backed with great masses of armor and precipitated the greatest tank battle to date. The Germans gained a wedge on the Belgorod front and added another ten divisions to the half million men invested in the battle. This giant blitz encountered not only Russian tanks but the splendid Russian artillery planted in hedgehog defenses to give cross fire. At the end of three days the Russians claimed 2,036 tanks, destroyed and 904 planes. At the end of the first week German assaults were diminishing along the 165-mile front and by July 18 the Russians had regained all the territory yielded to the German attack. Apparently intended only to pinch off the Kursk salient, this ten-day fiasco had not even served successfully as a holding offensive.

The Russian Orel Campaign. On July 16 the Russians seized the initiative around the Orel bulge into their lines to the north of Kursk, after a special visit to that front by Marshal Stalin, and with the battle cry "Westward!" in their throats and painted on tanks and trucks the Reds were soon rapidly reducing the last German spring board against Moscow. For many days the Russians recovered 30 to 100 populated places daily until August 5 when both Orel and Belgorod were taken. German retreat roads were piled with smashed tanks, burning tanks, and other war material. The Russian army had demonstrated its organic superiority over the Germans, in methods, skill, and human qualities. Its swift mobile tac-

tics often unnerved the inventors of blitzkrieg warfare.

Sweeping Russian Advances. On August 3 the Germans suffered a second offensive defeat along the Mius river and by the 8th the Russians were starting a pincer movement on Kharkov, advancing on a 300-mile front. On the 14th a third offensive was opened 80 miles north of Bryansk backed by the heaviest concentration of artillery assembled in any war. On the 21st the Russians had advanced 100 miles on the Kharkov front, but this advance was slowed by the necessity of laying new broad gauge railroad ties, to replace the ones sawed off by the Germans. German mines were also so numerous that the Germans were thought to be making more mines than shells. All towns were full of booby traps. Moscow estimated, nevertheless, that a million Germans had been killed or wounded in the six weeks since July 5.

The blackened ruins of Kharkov were again recovered on August 23 and a deep break-through made on the Donets river front south of Izyum. Taganrog, the Nazis' southern anchor, was stormed on the 31st. Some 35,000 Germans were killed and 5,000 captured.

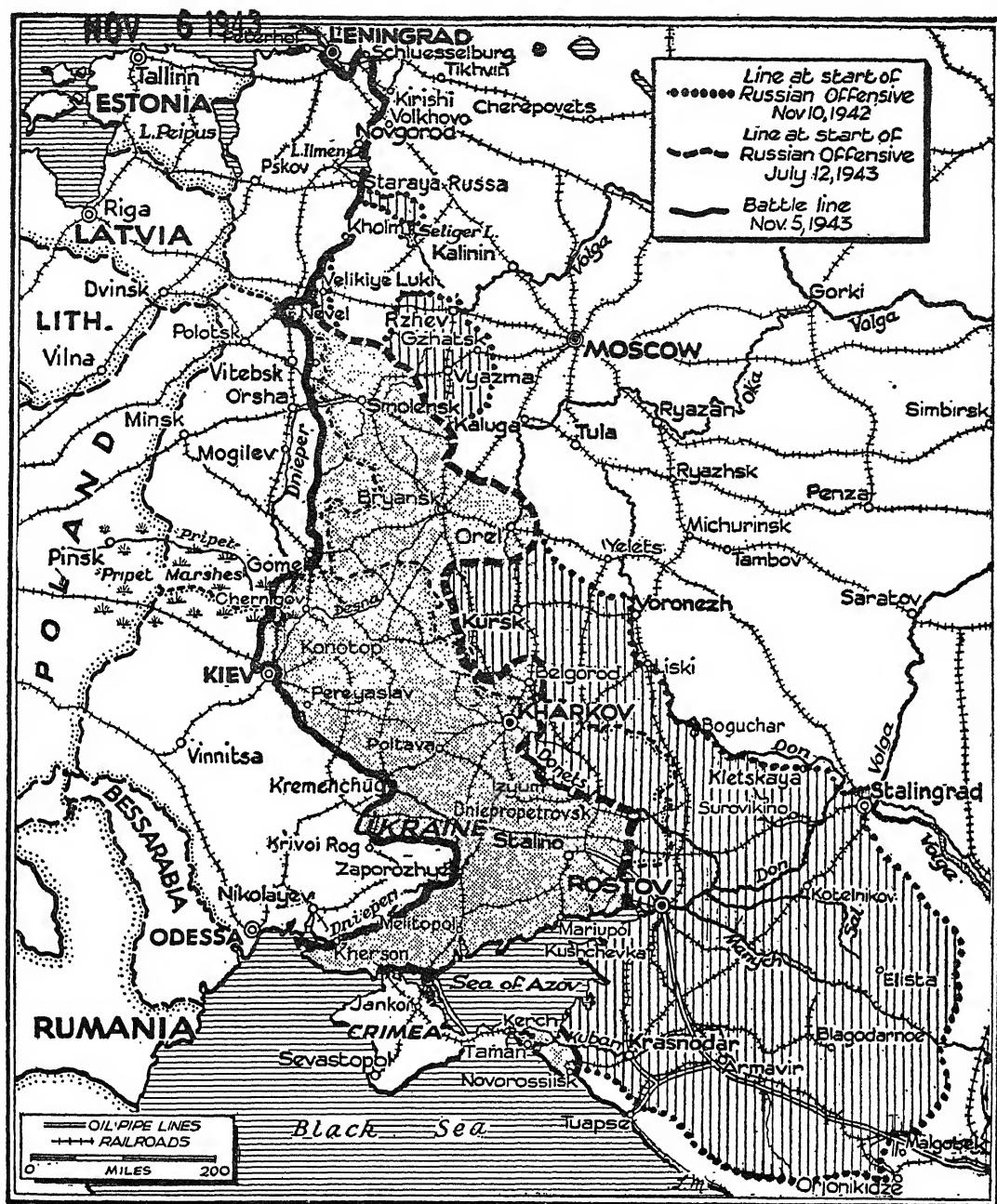
September was a month of great advances for the Russians. On the 1st they broke through the German lines on two wide fronts in the Smolensk region and in the south the Germans were in headlong retreat toward Stalino. From 300 to 400 populated places were recovered daily. Stalino was captured on the 9th and the Germans cleared out of the Donets basin. Russian spear heads were within 60 miles of the Dnieper River, virtually splitting the Germans' central army.

Bakhmach, key to German communications in the North Ukraine, fell on the 10th and Mariupol on the Sea of Azov. Bryansk and its twin city Bezhitsa were taken on the 14th and Novorossiisk in the Caucasus on the 16th. On the 19th the Red army had one of its greatest days, advancing on all fronts and taking 1,200 villages. Stalin issued three orders of the day announcing victories. For several days 1,100 places were regained daily. Poltava fell on the 24th and Smolensk the next day. The Dnieper was crossed repeatedly near Kiev on the 28th as the last German stronghold in the Kuban fell.

Battle for Kiev. As October opened, the Red armies had generally reached the mid sections of the great Dnieper River. They stood firmly on the eastern bank, but usually the opposite shore was higher, giving the Germans a distinct advantage. At Kiev the Russians looked up 600-foot cliffs on the German side. It was necessary to attack the city by a pincer movement from considerable distances north and south. The width of the river varied from 100 feet to 4,000, but it was crossed in early October by hardy Russian men who took every risk to get over, and many other crossings followed.

In the Vitebsk area, 300 miles due north of Kiev, the Russians pressed toward Vitebsk from the south and captured Nevel, a railway center to the north, opening up access to the Baltic States. Cold autumn rains changed roads into quagmires, yet the Russian troops in White Russia took 460 towns, including Cherikov, on October 2 and advanced toward Gomel, Mogilev, and Vitebsk.

Throughout these months Moscow celebrated the capture of important points with salvos from 124 guns. On October 24 they boomed for the capture of Melitopol, a city near the Sea of Azov which commanded the approaches to the Crimea. The city was taken after a savage struggle from



Courtesy of The New York Times

RED ARMY GAINS FROM NOV. 10, 1942, TO NOV. 5, 1943

The territory shown in striping was retaken between the beginning of the counter-offensive at Stalingrad and July 12, 1943, when the Russians launched their great summer offensive. Subsequent gains are indicated by heavy shading.

house to house which lasted 11 days and entailed the killing of 20,000 Germans. On this occasion the thunder of the celebrating cannon was heard by Secretary Hull and the other delegates to the Moscow conference. Zaporozhye, at the eastern end of the great Dnieper bend, fell on October 14, and Pyatikhatka, cutting the vital Dnepropetrovsk-Znamenka railroad, on the 20th. The great dam and the new industrial center at Dnepropetrovsk were recovered on the 25th, much more damaged

than the Russians had left them. The Russians had themselves put the great hydroelectric plant out of commission when they retreated, but by strategic damage which could be repaired.

The systematic demolition of the cities of the Ukraine as the Germans withdrew spurred the Russians to fight their hardest in order to deprive the Germans of the necessary time to destroy. At the best they found that new porcelain delayed-action mines, which could not be detected by in-

struments, continued to explode after towns were captured. Nevertheless, Kiev was recovered on November 6 relatively undamaged as compared with demolished Kharkov, though only 65,000 of the city's former 900,000 people crept back to the city and out of its cellars, emaciated skeletons in rags. Some of those surviving presented evidence of mass slaughter and burning of scores of thousands of Jews and Russians. The Russians feared that with all the speed they could muster a third of the Ukraine's 40,000,000 people would be gone before the area was recovered. The destruction of people and the means of livelihood was so grave over an enormous area of European Russia that only a rising industrial colossus and a prolific people could hope to recover in measurable time from the damage done.

Krivoi Rog Held. At the end of October a rapid advance of 60 miles by the Russians from the north arc of the Dnieper bend put them far below the river and close to Krivoi Rog, great iron center which had a prewar population of 200,000. Further progress would entrap large forces, a danger so real as to lead the German official communiqué to use such terms as "dangerous enemy break through" and to invent the famous phrase "disengaging movements." By October 29 the German retreat was so rapid as to suggest a rout. German G.H.Q. in South Russia was moved back to Odessa.

Spectacular Russian advances proceeded for several days, bringing the Russians to the Perekop Isthmus into the Crimea on November 1 and imperiling 40 German divisions along the lower reaches of the Dnieper. There was talk in London that the Germans might have to sue for peace. However, the Krivoi Rog salient was contained and the vital rail junction at Apostolovo, 25 miles to the south, was protected, with its three rail lines over which the Germans in the Dnieper bend could retreat when necessary. Then, after the fall of Kiev, the Russians expanded a broad bulge to the west which was even more dangerous to the Germans, since its southward extension would throw the Germans out of Southern Russia entirely and back into Rumania. In the meantime, the Russian push along the Black Sea had brought them to Kherson at the mouth of the Dnieper, midway between Perekop and Odessa.

All-out War. A special Russian Communiqué, on November 4, claimed 2,700,000 German casualties since July 5 and the recapture of 135,135 square miles during the summer campaign, raising the total ground recovered since Stalingrad to 335,000 square miles. The whole Donbas region was liberated, "the most important coal and iron district of our country," and the majority of the rail lines linking the center of Russia to the south had been recovered. In addition to the Dnieper line three other strongly fortified lines had been smashed, on the northern Donets, Desna, and Sozh rivers. The captured material listed included 3,600,000 mines, 6,800 guns, and 7,759,000 shells. Further evidence of Russia's tremendous war effort was supplied by the U.S. War Production Board's chairman, Donald M. Nelson, who returned from Russia saying: "I did not know what all-out war was until I saw the all-out war Russia is waging."

Battle of the Kiev Bulge. In pursuance of their fluid strategy which called for pressure on all fronts, ready to exploit areas where resistance was weak, the Russians pushed on beyond Kiev, taking Fastov, an important rail junction, on November 7, and Zhitomer on the 13th, only 67 miles from the

old Polish border. This point controlled the only good railroad connecting the German forces in the north and south and its loss was so vital that the Germans were spurred to concentrate against the spreading Kiev bulge and on November 18 they recovered Zhitomer. This success initiated a sustained effort to punch through with an enormous concentration of armor, similar to the attempted offensive at Kursk in July. The Russian defense tactics were also the same: formidable mine barriers backed with tremendous concentrations of artillery, sighted carefully on the German gun positions, with the Russian tanks held back in the deep defensive zone. These tactics again gripped the German armored fist and prevented it from breaking through, though some ground was yielded slowly as the struggle swayed back and forth until the end of the year in the most furious fighting since Stalingrad. Intrepid scouting and excellent staff work also continued to serve the Russians well.

Lines Stiffened for Winter Campaign. Meanwhile Russian pincers steadily tightened around Gomel, 135 miles north of Kiev, until it was taken and considerable progress made on the road to Minsk. New Russian advances were also recorded in the Krivoi Rog sector and a bridgehead was made good on the Crimean side of the Kerch straits. The advance north of Gomel was so rapid that the Germans abandoned large stores of equipment. In the whole of Central and South Russia they had been pushed out of the large cities and other winter positions and had no desirable places to which to retreat. As delayed snows and freezing weather came to the southern front in early December the German prospects for a third winter in Russia were not bright. Yet they had conducted for more than a year a great retreat, without disaster after Stalingrad. The Germans had also blocked the apparent Russian plan to break the Wehrmacht into three great segments by taking the offensive against the Kiev bulge and by holding the Russian drive from Nevel toward the Baltic. Their center was guarded by the Pripet Marshes, a vast area of forests filled with many swamps, through which only small bodies of men could maneuver.

As the Tehran declaration by President Roosevelt, Premier Stalin, and Prime Minister Churchill warned them that "no power on earth can prevent our destroying the German armies by land, their U-boats by sea, and their war plants from the air," the Germans in Russia suffered from two fatal handicaps—inferiority in the air and lesser numbers. The German necessity to defend all Europe by air left the Russian air force, long trained to act as a tactical arm for the armies, increasing scope. And while German reserves dwindled, due partly to the evaporation of satellite allies—Rumanian, Hungarian, and Spanish—the Russians maintained a strong strategic reserve, which could support any section of the long front. Yet the Germans had raised many new divisions and stood ready to meet the promised assault on Fortress Europa "from the East, the South, and the West."

In the middle of December the Germans increased their pressure on the Kiev bulge, pushing it back within 55 miles of the Ukrainian capital, but the Russians proceeded calmly with a new offensive south of Kiev, across the northern arm of the Dnieper bend, taking Znamenka on December 9 near the important city of Smela, through which three rail lines passed. A few days later Cherkasy, the last important German stronghold on the middle Dnieper River fell, giving the Red Army a firm grip on the great river, down to the bend.

Baltic Offensive. Action then switched to the north. A big Russian offensive on the Nevel front pushed the Germans back 20 miles in the five days after December 15. By Christmas, 600 populated places had been recovered and the strong German bastion, Vitebsk, was only 11 miles in front of the Red Army. This distance was shortened in succeeding days and steel arms were driven around Vitebsk until an escape corridor only 10 miles wide remained open on December 31. Both the highway and railway to Polotsk had been cut. This town, 40 miles west of Vitebsk, was a next objective of General Bagramian's First Baltic Army, from which point the trunk railway south from Leningrad could be gravely threatened.

It was the obvious purpose of this army to cut through to Riga and entrap or force the retirement of all the Germans in the Leningrad area, an objective which seemed feasible as the year ended.

Break Through in the South. On December 26, the Kiev bulge flamed again, this time from the Russian side. For six weeks the Germans had been slowly pressing this bulge back, at heavy cost of tanks and trained reserves. Then in six days they lost the fruit of their great effort, very much as they did in the abortive Kursk offensive which opened the summer campaigns. General Vatutin's

First Ukrainian Army struck now with repaired communications and accumulated supplies behind it. A 50-mile breach was rapidly pushed west toward Zhitomer which was again recaptured on the 31st. A few days later as the Russian drive neared the old Polish border on a still broader front, it halted and struck south toward the Rumanian border.

Observers wondered why the Germans tarried in the bulk of the great Dnieper bend. The Russians quickly recovered Berdichev and were striking toward Zhmerinka from which point they could cut the last main rail exit from the bend. After Stalingrad the Germans had managed to avoid encirclement. Now a greater Stalingrad seemed in the making, one aided by a powerful Russian army inside the Dnieper bend pushing against the Germans from the east.

The failure of the Germans to shorten their line and thus increase their reserves appeared to be due to political reasons, the fear that panic in Rumania would spread to Bulgaria and Hungary, thus crumbling the whole Balkan front. Cries for peace from these satellite allies were becoming louder with each day's advance of the Russian armies.

In the north, the Germans appeared to linger at Leningrad for the same reason, to avoid Finland's exit from the war. The deep reluctance of



Courtesy of The New York Times

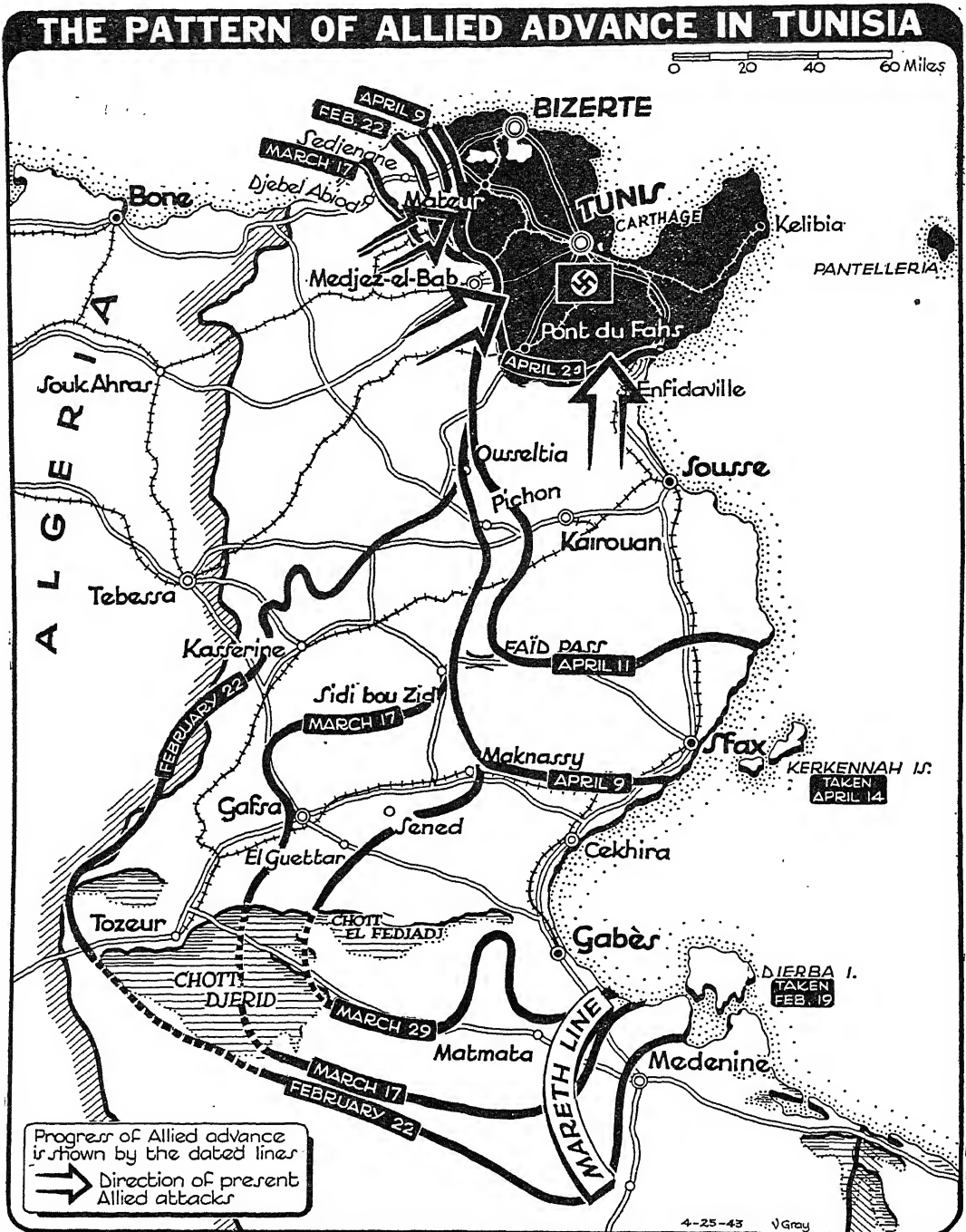
RUSSIAN ADVANCE DURING JULY 12-DEC. 31, 1943

The numbered arrows designate the major Soviet drives under way at the year's end.

the Nazis to see their empire crumble, or to give up a square mile that might be held, had stretched their eastern front until 190 divisions were pinned down on it, as that great dread of all Germans, a two-front war, was about to materialize.

To meet the Allied invasions from the West and South the Germans had 7 divisions in Norway, 18

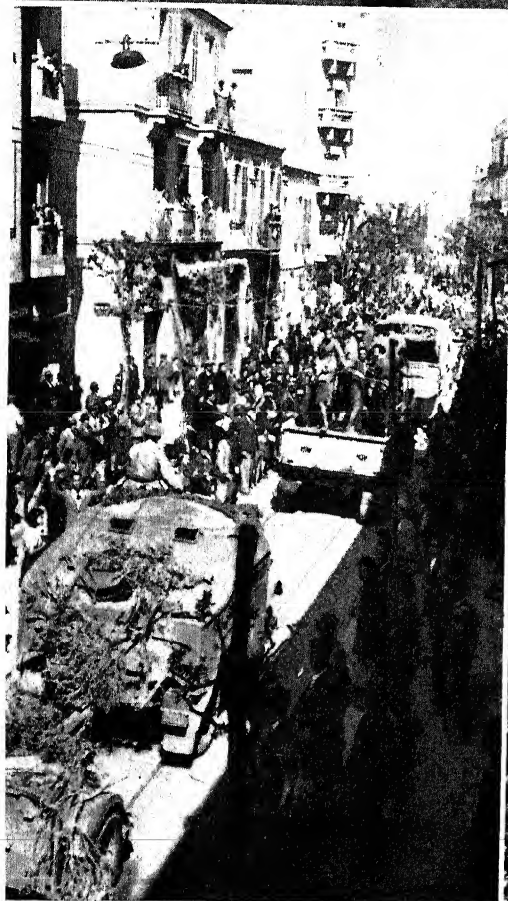
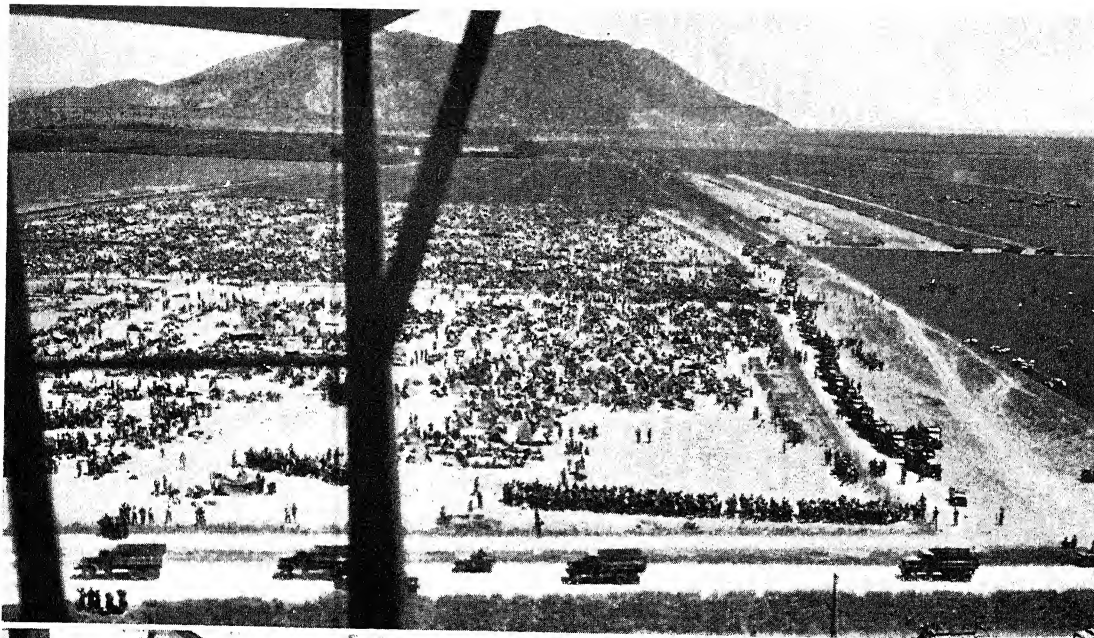
in the Balkans, 20 to 25 in Italy and between 45 and 50 opposite Britain. These were formidable forces, but again they were stretched far and fairly well pinned down where they were. It was doubtful that the Germans had a large strategic reserve anywhere. They could only regain such reserves by a general and successful retreat from Russia.



Courtesy of The New York Times

THE TUNISIAN CAMPAIGN

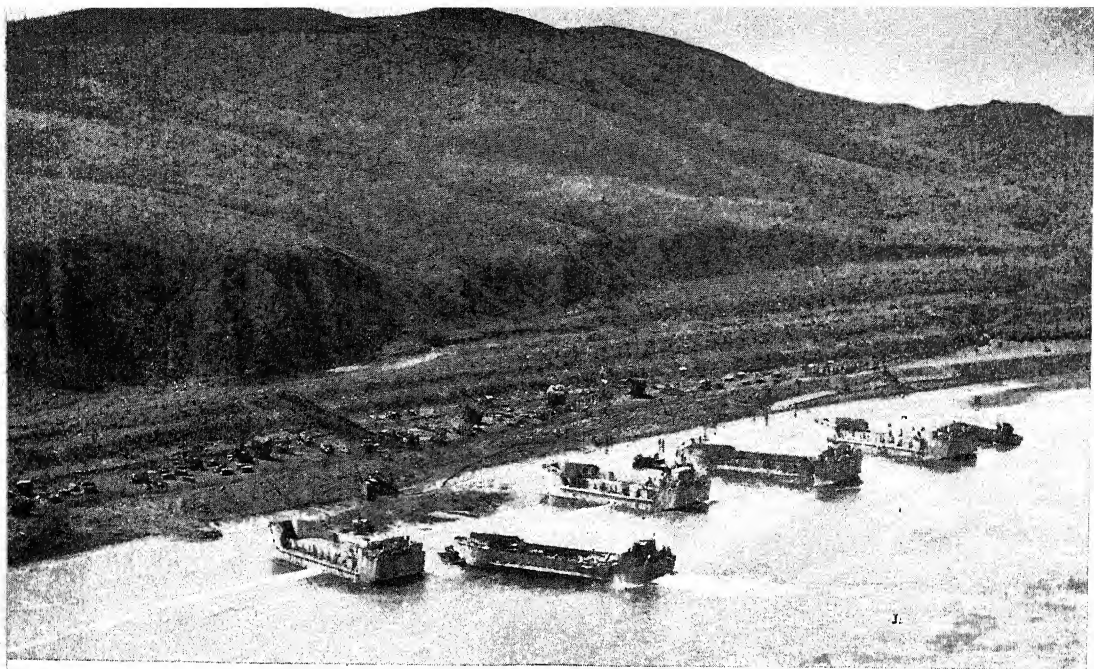
The successive steps by which the Allies pushed the Axis forces back into the Tunis-Bizerte area prior to the final offensive which ended all organized resistance by May 12.



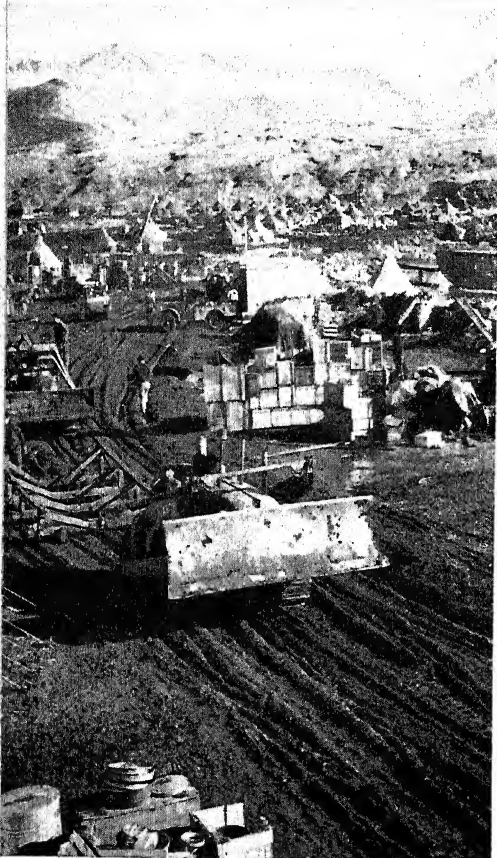
Signal Corps Photos

ALLIES DRIVE THE AXIS FROM NORTH AFRICA

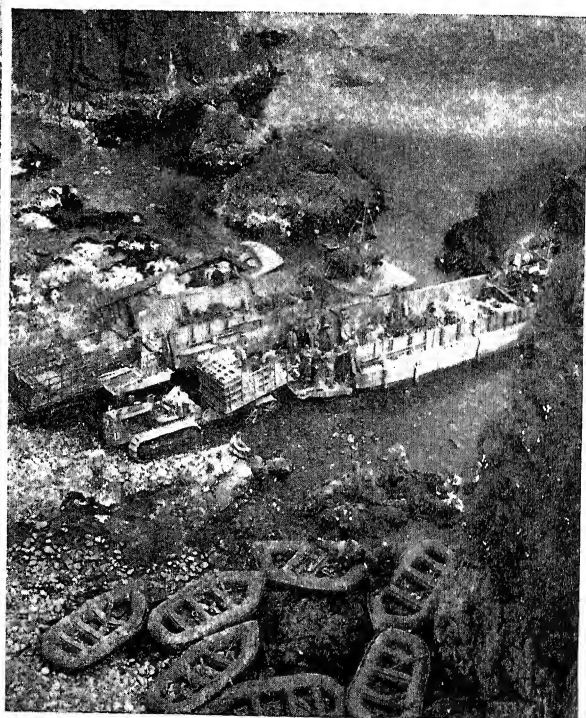
Above: Aerial view of a German Prisoner of War Camp west of Mateur. Left: Victorious Allied troops enter Tunis. Right: More than 27,000 Allied troops take part in a Victory Parade through the streets of Tunis.



U.S. and Canadian troops swarm ashore on the northwest coast of Kiska. They can be seen climbing to the highest hill, unaware that the Japs had fled.



Official U.S. Navy Photos



LANDING OPERATIONS ON KISKA AND ATTU

On Attu, left, the "Seabees" (Construction Battalion) begin the work of reconstruction. On Kiska, landing craft of joint U.S.-Canadian forces show but part of the strength that was prepared for use.

TUNISIA-ITALY CAMPAIGNS

The Drive for Tunisia. Next in importance after the turn of the tide at Stalingrad was the Anglo-American offensive in North Africa. This was not a second front as the Russians understood the term, one drawing off a large number of Axis divisions, but it was a long step toward seizing complete control of the most vital waterway in the world, the Mediterranean Sea. That would shorten by 4,000 miles the route to Russia's southern window and to our base against Japan in India. It would also open up all Southern Europe to attack and force the Nazis to fight, or be ready to fight, at the farthest distance from their center of power and at the end of dangerous communications.

The Allied landings in Morocco and Algeria, on Nov. 8, 1942, met considerable resistance from the Vichy French, but not as much as had been expected. This might have enabled us to seize Tunis also, had the second and third waves of shipping from Britain been timed to arrive a few days earlier. There was, however, considerable danger of air attack from Sardinia and Sicily on our convoys, and the necessity of concentrating most of the troops originally landed around Spanish Morocco, where 140,000 troops of the Spanish fascist regime were capable of causing serious trouble in our rear. But for the holding action which Franco's troops performed, the bulk of the Anglo-American forces could have been rushed to Tunisia faster and sooner. As it was, they lost the race for the control point of the Mediterranean narrows by only a matter of two days. The British First Army advanced 300 miles in a week and was only 12 miles from Tunis at the end of November, but could get no closer. The Axis had thrown in too many troops, both by sea and air.

Then as British and American troops wrestled with muddy air fields and 500 miles of hilly roads, Marshal Erwin Rommel hastened his retreat across Libya from the east. The capital city, Tripoli, was surrendered to Gen. Bernard Law Montgomery's British Eighth Army on January 24 and by the end of the month the bulk of Rommel's forces were entering Tunisia, where the French Mareth line, erected as a defense against Italy, awaited him.

Battle of the Faïd-Kasserine Passes. By this time American troops were at Maknassy, 33 miles from the Gulf of Gabes, and on February 1 they attacked the Germans at Faïd Pass farther north in Central Tunisia. The attack was rebuffed and on the 14th a veteran German armored division smashed through American positions in the Faïd-Sened sector and advanced 18 miles, breaking one counter attack. Another American tank attack regained 6 miles, but on the 17th and 18th the German 21st and 10th armored divisions drove our tank forces back 22 miles and captured both Sbeitla and Kasserine. Intending to teach the green Americans a lesson, the enemy recovered 4,000 square miles, drove a wedge between the American and British forces, and disarranged Allied offensive plans.

Using new 60-ton tanks with 7 inches of armor on the turret, the Nazis took Kasserine Pass on the 21st but were then contained as veteran British units rushed south and joined in the fighting. On the 23rd, the German armored columns were battered to a standstill by American guns and joint R.A.F. and American air assaults. The next day smashing counter attacks by all arms pounded the Germans back 14 miles. They were obliged to burn ammunition stores and retreat with lights on through the Kasserine Gap.

Allied teamwork in the field was registered in the high command on February 11 by the appointment of three veteran British leaders to command the ground, air, and naval forces, all to serve under the American commander in chief, Gen. Dwight D. Eisenhower—Gen. Sir Harold Alexander in the field, Air Marshal Sir Arthur William Tedder, and Adm. Sir Andrew Browne Cunningham.

The emergency created by the Faïd-Kasserine defeat was so real that two American divisions were withdrawn from the watch on Spanish Morocco; the artillery of the Ninth Division covered 770 miles in three days en route to the Tunisian front. After the enemy was stopped he retreated rapidly, leaving a trail of wreckage behind him, and lunged at the British First Army in the north on February 27 and at the British Eighth Army in the south on March 8.

The Mareth Line Forced. These attacks were soon repulsed and a new American corps of four divisions pushed the enemy from the west, retaking the important road center of Gafsa on March 18, while the Eighth Army pounded Rommel from the south. He was thus unable to concentrate his reserves to stop either enemy. General Montgomery's men outflanked the main Mareth line positions on March 29 in one of the most brilliant engagements of the campaign. The waste land crossed was the worst encountered in the 2,000 mile advance from Egypt.

Axis Debacle. As the Germans retreated northward the Allied forces concentrated on a constantly decreasing target. Allied planes in great numbers pounded the German columns, moving bumper to bumper. By April 11 the Americans recaptured Faïd Pass. All forces advanced slowly, the Eighth Army taking Enfidaville on April 20 and the American Second Corps storming Hill 609 and gaining Mateur in the north May 3, their biggest victory. American troops were by now veterans. They had done their part in all the final stages, though the bulk of the fighting was done by the British throughout the campaign. The final knock-out blow was delivered by the British First Army, reinforced by three divisions from the Eighth, moved around from the south to the north while the Germans still faced south.

Tunis and Bizerta were captured by British-American forces on May 7, 181 days after their landing in North Africa. Thereafter the Axis remnants pressing into Cap Bon were harried by swarms of planes and swiftly moving columns which shot them down or rounded them up. In the entire campaign 267,000 Axis troops were captured, most of them in the final days. American casualties were 18,558, including 2,184 killed. London estimated that the entire African war had cost the Axis 750,000 men and enormous quantities of supplies.

Decisive Air and Sea Superiority. Allied air superiority was a leading factor throughout the Tunisian months. In the final days it was overwhelming. By April 12, 1,253 Axis planes had been shot down and nearly 1,000 hit on the ground. The next day the greatest single air engagement of the war recorded thus far took place off Cap Bon when 74 Axis planes were shot down, including 58 large Junkers-52 transports. A week later the enemy lost 20 more transport planes approaching Tunisia with troops and gasoline. As early as April 6, 1,000 attacks were made by Allied planes on air fields and shipping, but on May 7 there were 2,500 plane sorties in one day. Neither dive bombers nor tanks held any terrors for the British leaders, who felt

that both had been mastered by superior guns.

While the enemy was incessantly pounded from the air, both planes and warships took a steady toll of Axis shipping. As early as February 17 British submarines had sunk 54 Axis supply ships in the Mediterranean, damaging 36 others, and their torpedoes were equally effective in the later weeks. On April 7, 17 Axis ships were hit by air attack, and on the 10th the Italian heavy cruisers *Trieste* and *Gorizia* were put out of action near Sardinia by American Flying Fortresses.

Air assaults on Sicily gained momentum several weeks before the end in Tunisia. American airmen made a 400-plane assault on Palermo on May 9, their largest war effort to date. The Italian fortress island of Pantelleria was bombed into surrender on June 11, after 20 days of steady air assault and several naval bombardments, and the way for the invasion of Sicily was open.

The Conquest of Sicily. For the following month all arms of the Allied forces underwent intensive training while an invasion armada was assembled and the ports and air fields of Sicily were systematically bombed by planes based on widely scattered air fields in North Africa. This converging attack also blasted the defenses of Southern Italy, especially Naples and along the Strait of Messina.

The invasion of Sicily was begun in the night of July 9-10 by one of the largest air- and sea-borne expeditions yet assembled. Transport planes and gliders carried both British and American troops behind the coast line. The American 82nd Division was dropped beyond its expected targets but nevertheless aided in diverting the enemy and in seizing some beach heads. An air field was also soon taken.

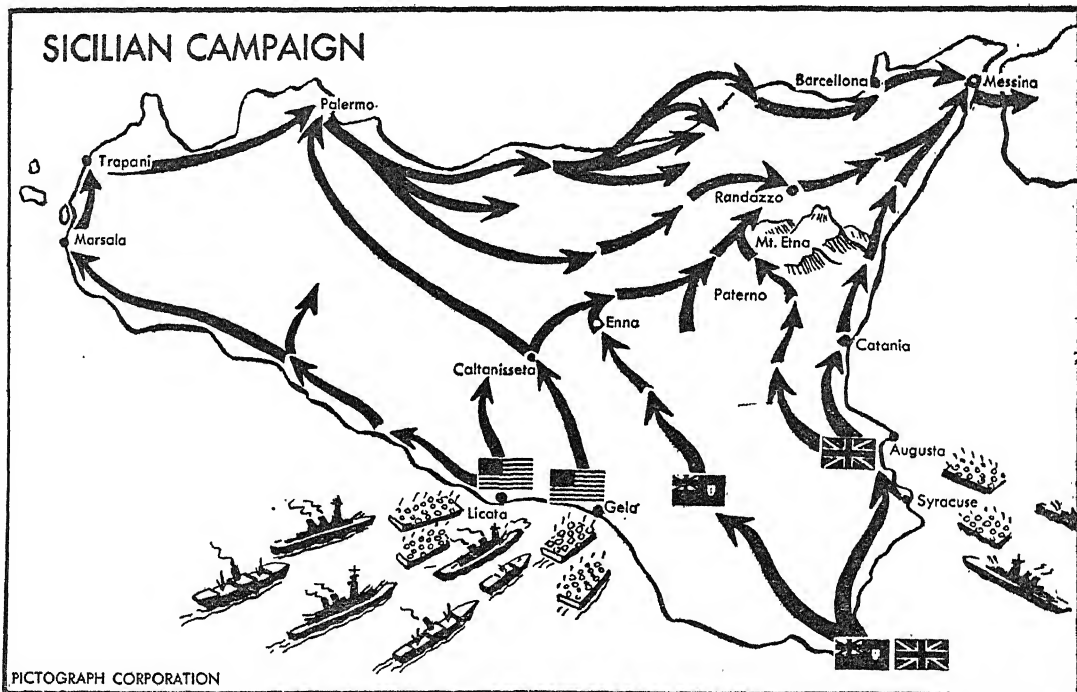
Tactical surprise was achieved. The enemy had expected the attack to come on the southwest coast and was unable to shift his forces quickly enough to the southeast.

The immense fleet of 3,200 transports, landing barges, and boats of all kinds was covered by great swarms of planes, bombers and fighters, as well as by warships, little and big. The landing by American units near Gela was comparatively easy, since the Italians had nowhere done much to construct defenses and were quick to surrender in droves. Yet before heavy weapons could be put ashore the German 15th Panzer Division came up and almost forced the invaders back into the sea until a night attack by the exhausted Americans retrieved the situation. Allied destroyers had strongly assisted during the day, pounding the German tanks with their guns.

The invasion land forces were again commanded by General Alexander. General Montgomery's British Eighth Army made landings on the southeast coast and a new American Seventh Army under Lieut. Gen. George S. Patton, Jr., took the south coast.

After the comparatively narrow coastal plains were secured by the Allies, the three German divisions which had to be beaten were aided by excellent defensive geography. Sicily is a maze of naked rock mountains with peaks and cliffs rising sharply above narrow valleys. Broken hills 2,000 feet high run into two mountain chains twice that height, with the 10,000 foot Mt. Etna massif in the northeast dominating eastern Sicily.

It was Mt. Etna which enabled the Germans to make a fairly prolonged resistance. Standing on the eastern flank of the mountain as it goes down to the sea at Catania they were able to hold up the Eighth Army until the Seventh had cut across the island to the north coast, taken Palermo, on July 23, and rolled the remaining German forces back along the north coast until all the Germans were in the small triangle framed by the sea behind Mt. Etna. Repeated American landings behind the Germans on the north coast accelerated their retreat



The strategy by which American and British-Canadian forces crushed German and Italian defenses in 38 days of heavy fighting.

until this pressure from the west compelled the enemy to abandon Catania, on August 5, and retreat northward to the bomb-wrecked evacuation zone at Messina, which was captured on August 17, 38 days after the initial landing.

It has been evident since that much later trouble would have been saved in Italy if the mainland could have been invaded when the conquest of Sicily was half completed, but assured. Mussolini was ousted from power in Italy by the fall of Sicily on July 25, Marshal Badoglio being made Premier. His Government dragged out negotiations for an armistice, which were already under way, until the Germans had time to throw 20 divisions into North Italy and to bring some of them to the Naples area, which the Allies invaded September 9, only one day after the capitulation of the Badoglio Government was announced. It is, however, not certain that light forces thrown into South Italy earlier would have been sufficient and it is clear that time is required to plan and assemble a tremendous amphibious landing.

In itself the Sicilian campaign was a well executed military operation which brought about important results. It made the Allied hold on the central Mediterranean secure. It brought about the fall of Mussolini and Italy's elimination from the war. Most of the Italian navy—5 battleships, 7 cruisers, and 11 destroyers—joined the Allied naval forces at Malta. A battleship, the *Roma*, was sunk by a German plane while escaping to Malta and the Nazis seized 25 Italian submarines in the Adriatic and the Aegean seas. On balance, the Italian fleet was eliminated from the German side and the augmented Allied navies freed to operate against Japan. The western Mediterranean was also more firmly gripped by the acquisition of Sardinia, with Italian help, and of Corsica through the action of French forces. In Corsica the Germans were aided by Italian Fascist army officers.

Rome Bombed. To impede the sending of Axis reinforcements south, Rome was bombed in daylight on July 19 by American fliers, who had been rigorously trained to avoid damage to cultural monuments. They directed their attack at the Ciampino airfield four miles southeast of Rome and the railroad yards on the north edge of the city. A mass of wreckage two miles long was left by the 500 attacking planes. One church nearby was damaged.

Ploesti Oil Fields Attacked. A far more dangerous air mission was executed on August 1 when 2,000 men of the Ninth U.S. Air Force took 175 Liberator bombers over the Rumanian oil refineries. The airmen had practised over a reproduction of the Ploesti installations erected in the Arabian desert. They were equipped with special low-altitude bomb sights and went in just above the targets, dropping 300 tons of bombs, mostly of the delayed action type, to impede fire fighting. Incendiaries caught quickly, forcing many of the later planes to fly through walls of flame and to bank steeply to avoid the explosions beneath them. The long overland trip gave the enemy time to assemble large numbers of fighters at high altitudes. These attacked as the invaders neared the target but were largely foiled by the low flying of our airmen in retreat. They stayed within 50 feet of the ground for 100 miles. About 30 bombers were lost in the 2,400-mile round trip. Fifty enemy planes were downed, and five of the 13 refineries were heavily damaged. The raid was one of many actions which indirectly aided the Russians.

Italy Invaded. The invasion of the Italian peninsula was timed to give the Italian troops on the mainland opportunity to hear of the Badoglio Gov-

ernment's capitulation. In telling Hitler why he had to quit, Badoglio explained that Italy's large cities, "beginning with Milan and Palermo, have either been destroyed or occupied by the enemy. Her industries have been paralyzed, her communications—of such importance because of the topography of the country—have been thrown into confusion."

The next day, on September 9, an invasion fleet which studded a thousand square miles of the Tyrrhenian Sea approached the long beaches of Salerno, south of Naples. The Allied landing forces—two British and one American divisions—were at once attacked by the 16th German Panzer Division, supported by two others.

For the next week a bitter, costly battle raged, with the Anglo-American Fifth Army under Lieut. Gen. Mark W. Clark steadily pouring ashore with mountains of supplies and the Germans constantly pounding them and counter attacking from the nearby hills. The invading forces seized the port of Salerno and a narrow bridgehead 24 miles long, which was almost split a time or two by German pushes from the higher terrain. Ground had to be yielded repeatedly. British and American warships shelled the German positions and the Allied Northwest Africa Air Force threw every plane it had into the battle. On September 14 there were 1,888 plane sorties, many of them by four-engine bombers, one plane a minute dropping nearly a ton of bombs on the enemy's positions, or a total of 1,284 tons. At one time the German radio confidently claimed a Dunkirk, but by September 16 the Fifth Army had driven an eight mile wedge into the German lines and the next day junction was made with a part of the British Eighth Army which had crossed the Strait of Messina at Reggio Calabria on September 3 and hastened by forced marches up the west coast.

The main body of the British Eighth proceeded by sea to Taranto, inside the heel of Italy and advanced 200 miles up the east coast, taking Foggia on September 28, the greatest multiple air base in southern Italy—badly wrecked by repeated Allied bombings. Across the peninsula, likewise, the Fifth Army took Naples, on October 2, after the Germans had thoroughly looted the city, burned much of it and blocked the harbor with 30 sunken ships. Public buildings and factories were ruined.

Thus for the second time the massive attack methods of our commanders had eventually succeeded, but without the trial of swift, daring strokes much earlier which might have gained valuable ports intact and saved months of time—long months to the many enslaved nations of Europe.

Wildly cheering crowds greeted the Allies at Naples, where the inhabitants were substantially without food and water. A week later a German time bomb killed 100 people in the post office, as the Allies established a line all the way across the Italian peninsula and began the slow business of pushing the Germans northward.

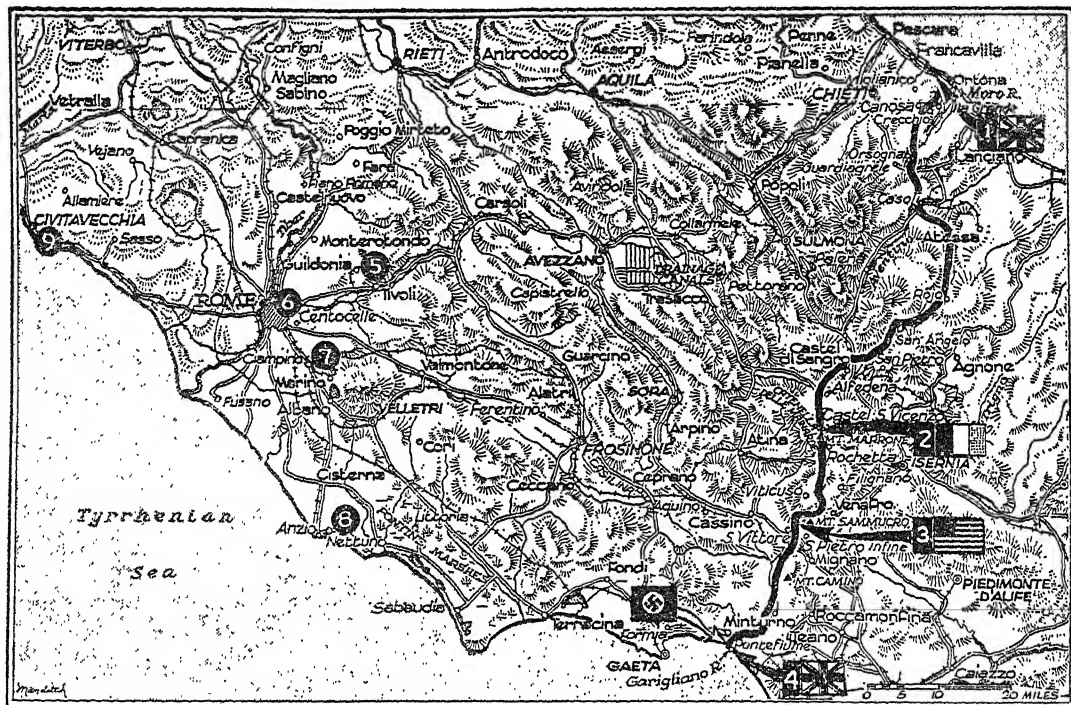
Progress was slow across muddy fields and swollen rivers. The Volturno River was not crossed in force until October 15 in a night assault. When the Germans were blasted from one set of positions they took up another line, yielding slowly but turning "the soft underbelly of Europe" into something very hard and prickly. Gains were in terms of three or four miles with the fighting often ascending steep mountain positions where climbing was extremely hazardous. Almost every communiqué mentioned rain and mud, and when nature did not provide, the Germans sometimes flooded the coastal areas from reservoirs in the hills.

By November 8 the enemy's line from Mon-dragone, on the west coast, over Mount Massico to Venaturo was generally punctured, but the Germans increased their strength to ten divisions. By this time the commentators had about abandoned predictions of an Allied landing behind the Germans, under an air umbrella from Corsica, concluding that our high command preferred now to regard the Italian operation mainly as a holding one, saving their strength for other and more promising landings.

The Germans destroyed the port of Gaeta on November 9 and slowed the Allied advance by counterattacks until incessant floods enforced a stalemate in mid-November. Thereafter, the two

Salerno." On the 23rd there was bitter fighting along the entire front, with a desperate struggle beginning for the pleasant coastal town of Ortona on the Adriatic. The 15,000 inhabitants of the place took to the hills as the Canadians began to batter the Germans out. German tanks were sunk into cellars so that their guns could fire flush with the street levels, and it took a week to blast them out.

Then the Eighth Army started up the coastal road toward Pescara, some 15 miles north, from which an important lateral road ran across Italy to Rome, but a mile a day was reported as good progress. Every sort of booby trap and gunfire slowed up the advance. Heavy rains persisted on



Courtesy of The New York Times

ITALIAN FRONT AT THE CLOSE OF 1943

The British Eighth Army (1) was pushing northward from ruined Ortona, while French Moroccan formations (2), American units (3) and British forces (4) of Gen. Mark W. Clark's Fifth Army were advancing slowly on the western half of the front. Meanwhile Allied bombers were softening up German airfields (5-9) in preparation for the amphibious landing in the Anzio-Nettuno area that followed towards the end of January, 1944.

armies inched ahead until December when the Italian front began to take the headlines again. Allied troops drove their way over the highest peaks of the Mount Cassino mass, on December 4, and an air and artillery bombardment, thought to be equal to that which cracked the German line at El Alamein, broke the heart of the enemy's winter line. Fierce German attacks compelled the Eighth Army to yield ground, but on December 8 General Clark's men had won control of the major heights over 25 square miles of the Camino-Maggiore mountain masses "by the grim process of gouging their way from height to height and pounding, knifeing, and scrambling up and over."

Slow Progress Toward Rome. This description continued to apply to the fighting in Italy during the last half of December. On the 20th San Pietro Infine was captured by General Clark's Fifth Army "after the fiercest and bloodiest fighting since

the entire front, reaching flood proportions frequently. Indian units captured Villa Grande on the 27th, a week after French troops had been reported in action on this front. The Americans gained full possession of the Mount Sammucro massif and moved down its slopes toward Cassino.

Everywhere progress was slow and bitterly contested. Some observers predicted the capture of Rome during the winter, but others recalled that Hannibal had spent a dozen years in Southern Italy without being able to reach Rome. As the year ended, the Allied armies were still distinctly closer to Naples than to Rome, and a strong new "Siegfried Line" was reported to have been completed between them and the capital.

Both sides had accepted the Italian fight as a limited engagement. Intending to use their main strength elsewhere, the Allies apparently aspired only to capture the Rome cluster of air fields and

to pin down a dozen German divisions, while the Germans were content to make their foes pay heavily for inching progress up the peninsula.

THE BALKANS

Allies Win and Lose Greek Islands. For many months the Germans reigned supreme in the Balkans until the collapse of Italy opened up chinks in their armor of force and terrorism. While they were busy coping with the Italian defection the British Middle Eastern Command seized a foothold on Leros, Samos, Kos, and other small Dodecanese islands. Leros was valuable as a naval, seaplane, and submarine base, and all of the islands gave the allies footholds for attack on Crete.

The Germans reacted with their customary vigor and rushed reinforcements from Salonika and the Piraeus to prevent other Allied seizures. On October 4 they attacked by sea and air on Kos and soon captured it. On November 14 Leros was also invaded and captured, after a five-day battle during which the Germans maintained air supremacy, and thereafter the Germans rapidly restored their position in the Dodecanese.

This success was welcome to the victory-starved Germans and it was of considerable value in holding their Balkan satellites in line after the fall of Italy. The reduction of Crete—rocky, heavily fortified, and defended by Germans alone, or even of Rhodes in the same circumstances, would not be as easy as the conquest of Sicily and Sardinia. Rhodes was, however, frequently bombed and Allied squadrons ranged over other Greek bases.

Partisans Rise in Yugoslavia. One of the best gains from the collapse of Italy was the confusion it caused in Yugoslavia, where the Italians had been doing much of the garrison duty. When their government quit, the Italian troops generally stopped working for the Germans. At least one whole division joined the Yugoslav Partisans and many other smaller groups of Italians did likewise. Equally important was the amount of Italian arms and munitions which fell into the hands of the Partisans, and the disorganization in the Axis ranks enabled them to organize and expand the territory under their control.

The Partisans represented mainly Croats, Slovenes, Bosnians, Montenegrins, and other elements in Yugoslavia which had resented the dominant role of the Serbs in the Yugoslav kingdom. Throughout its life they had protested against the centralized nature of the government, preferring a real federal structure, but without avail. Now rejecting German rule they aspired to create a broader Yugoslavia, perhaps to include also Bulgaria.

Naturally this movement was frowned upon by the Yugoslav Government-in-Exile, which moved from London to Cairo after the fall of Sicily. Gen. Draja Mihailovitch, King Peter's field commander, was often accused of fighting the Partisans more than he did the Germans. Not a little blood was shed between the two guerrilla forces. Both claimed that their numbers were much larger.

For a time the world could make little out of the controversy, except that Russia was backing the Partisans and that the Partisan leader, Gen. Josip (Tito) Broz, had been in Russia. After the Allied invasion of Italy it gradually became clear that the Partisan movement was the larger and that it was fighting Germans much more successfully. While Mihailovitch was biding his time and waiting for the Allied invasion, partly on advice from London and Cairo, the Partisans were fighting and thus drawing people rapidly into their ranks.

When southern Italy was occupied by the Allies, small boats began at once to rush supplies over the Adriatic to the Yugoslav Partisans. When Italy dropped out of the war the Germans rushed to seize the Dalmatian coast, but the Partisans took control of most of it, including Susak and Ogulin. They also entered Trieste and began to capture the islands along the Yugoslav coast. Marshal Erwin Rommel was placed in command of the German effort to recover this region, but success for the Partisans continued to be reported. Mihailovitch's forces also became more active against the Germans.

On November 13, Partisan forces in Belgrade sank an armored river boat on the Danube and captured another. Allied air forces blasted Sofia, interfering with German rail traffic into Greece. The Germans sent heavy reinforcements into Yugoslavia.

On December 9 the British Parliament was told that more help was being given to the Partisans than to Mihailovitch. The next day Secretary Hull said this was also true of American aid. On December 22 the Partisan army was reported to comprise 300,000 men and women fighting along a 350-mile front against some of the best soldiers of the German army. See YUGOSLAVIA under *History*.

Guerrillas in Greece. In Greece, also, the collapse of Italy and the inflow of Allied supplies was followed by an increase in the numbers and activity of widely scattered guerrilla bands. The guerrilla activities were coordinated with Allied strategy through British liaison officers sent to Greece by General Wilson, the Allied commander in the Middle East. However the outbreak of civil war in the autumn between Communist-led and non-Communist guerrilla organizations enabled German troops to make headway against them. See GREECE under *History*.

These political difficulties somewhat weakened the chances of effective support for an Allied invasion of the Balkans, yet the rapid Russian advances toward Rumania made an Allied push up the Vardas-Morava Valley from Salonika attractive, if Germany's Aegean fortresses could be stormed, and great numbers of brave men were waiting to intensify their work of cutting roads and railways, blowing up bridges, and keeping the Germans cooped up in the cities.

THE WAR IN THE PACIFIC

Pause in the Pacific. The month of November, 1942, was notable not only for the turning of the tide at Stalingrad, the defeat of Rommel at El Alamein in Egypt, and the allied landings in North Africa, but for a series of air-naval battles in the Southwest Pacific which made good our invasion of Guadalcanal and of the Buna-Gona area in New Guinea.

The Buna area was finally cleared of Japs on Jan. 3, 1943, and they abandoned Guadalcanal February 9, shortly after the battle-weary marines had been relieved by the army. Relative pause in the first quarter of the year was broken on March 3 by the total destruction by air in the Bismarck Sea of a Japanese convoy of 22 vessels—12 loaded transports and 10 warships. Remnants of the fleet, including barges and lifeboats, were wiped out the next day. The enemy lost 82 planes and about 15,000 troops which were en route from Rabaul to Lae on New Guinea. Our losses were one bomber and three fighters. Two enemy cruisers and one destroyer were also sunk near New Ireland on April 4.

The Bismarck Sea battle was followed by two

heavy air attacks on Rabaul late in March and by a series of Japanese air assaults early in April. Two heavy attacks on Guadalcanal netted four American ships sunk. Large Jap formations also raided Oro Bay, Port Moresby, and Milne Bay, New Guinea. Enemy losses were heavy in all these encounters.

Attu and Kiska Recovered. In the North Pacific, the Japanese base on Kiska was bombed throughout the day, when the fogs cleared, on several days during April. Amchitka Island, 70 miles away, was occupied as a U.S. plane base on May 7 and Attu, the outermost Aleutian island in Japanese hands, was invaded May 14. Enemy resistance was finally ended two weeks later in stubborn fights on rugged peaks above the clouds.

In succeeding weeks Kiska was shelled and bombed more than 100 times and on August 15 a major landing force found the island devoid of Japanese. The enemy had gradually withdrawn approximately 10,000 troops at night and during the perennial fogs. Previously, several air attacks had been made on Paramushiru, the Japanese base in the Northern Kuriles.

Persistent pressure led by the *Chicago Tribune* for reversing U.S. global strategy and going all out against Japan was met by a statement from President Roosevelt in May that the larger part of both naval and ground forces overseas were in the Pacific. Gen. Douglas MacArthur, Allied commander in the Southwestern Pacific, indicated his own dissatisfaction on August 9 by saying: "We are doing

what we can with what we have." On September 21 he again assailed "island hopping" strategy and strongly emphasized his willingness to play a subordinate role.

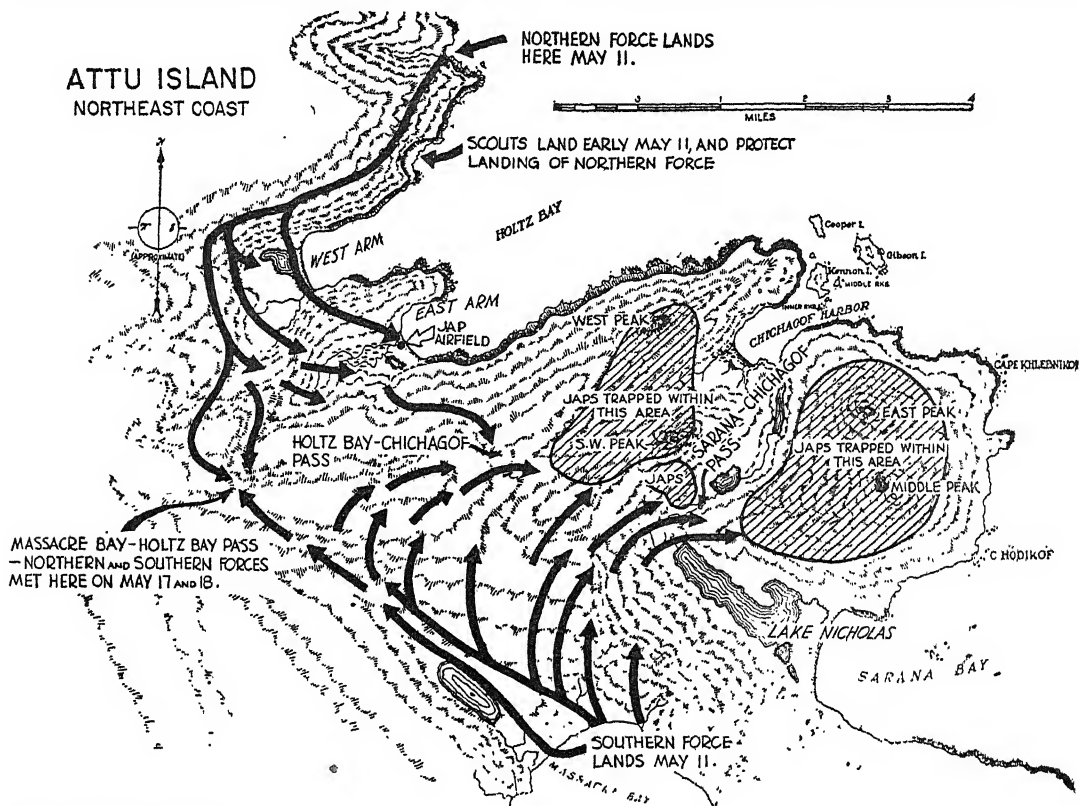
Double Offensive in the Southwest. Allied sea and air superiority was increased by the submarine sinking of 20 Japanese ships during June and the destruction of 94 Japanese planes at a cost of 6 at Guadalcanal on June 17.

On July 1 two closely synchronized offensives were begun in the Southwest Pacific. General MacArthur's forces moved on the Japanese base at Salamaua, New Guinea, and took it on September 13. Lae fell on the 18th. Parachute troops and artillery dropped behind the enemy had completed his encirclement.

In the Solomons Adm. William F. Halsey's forces occupied Rendova Island near New Georgia, on July 2, and began to shell Munda, the Japanese base on New Georgia, which was soon invested by land and eventually captured on August 7 after weeks of jungle fighting.

Two naval battles in the narrow waters of the Kula Gulf, north of New Georgia, featured the struggle for Munda. On July 5 nine Japanese warships were believed to be sunk and on the 13th a cruiser and three destroyers. Our navy lost a cruiser in the first battle.

Mounting air attacks left both Munda and Salamaua in ruins before their capture. Our fighters also destroyed seven Japanese ships on July 18, including a cruiser and two destroyers, and dropped



Army Air Forces Photo

ATTU ISLAND CAMPAIGN

The map shows the landings of the U.S. northern and southern forces and the routes by which they converged to trap and exterminate the Japanese defenders.

133 tons of bombs on Bairoko Harbor, near Munda, on the 21st. This heaviest Pacific raid to date was exceeded on August 18 when 10,000 bombs were loosed over Wewak in central New Guinea. A large fleet of planes was caught parked closely and 120 of them destroyed. The whole peninsula was left aflame. Return attacks the next day destroyed other aircraft, including 25 shot down. At the same time long-range Allied bombers blasted the naval base at Surabaya, Java, in a 2,400-mile trip, leaving fires visible for 140 miles. While no branches of the armed forces could be spared, it was clear that the air arm was of crucial importance in the vast stretches of the Pacific.

Autumn Advances. On October 4 Finschhafen, Japanese-held port on New Guinea opposite New Britain, was taken and a coordinated land drive from Port Moresby up the Markham Valley flanked and neutralized all Japanese positions along the New Guinea peninsula as far north as Madang. In the Solomons a Japanese evacuation of Vila on Kolombangara Island was broken up when American warships shelled 40 barges laden with troops. Another evacuation attempt led to a sea battle on the 8th which resulted in the loss of a Japanese cruiser and two destroyers.

The silent war of our submarines in the Pacific came momentarily into the news when the President announced, on October 13, that 750,000 tons of Japanese shipping had been sunk by our subs in the preceding six months.

The next day General MacArthur assembled the

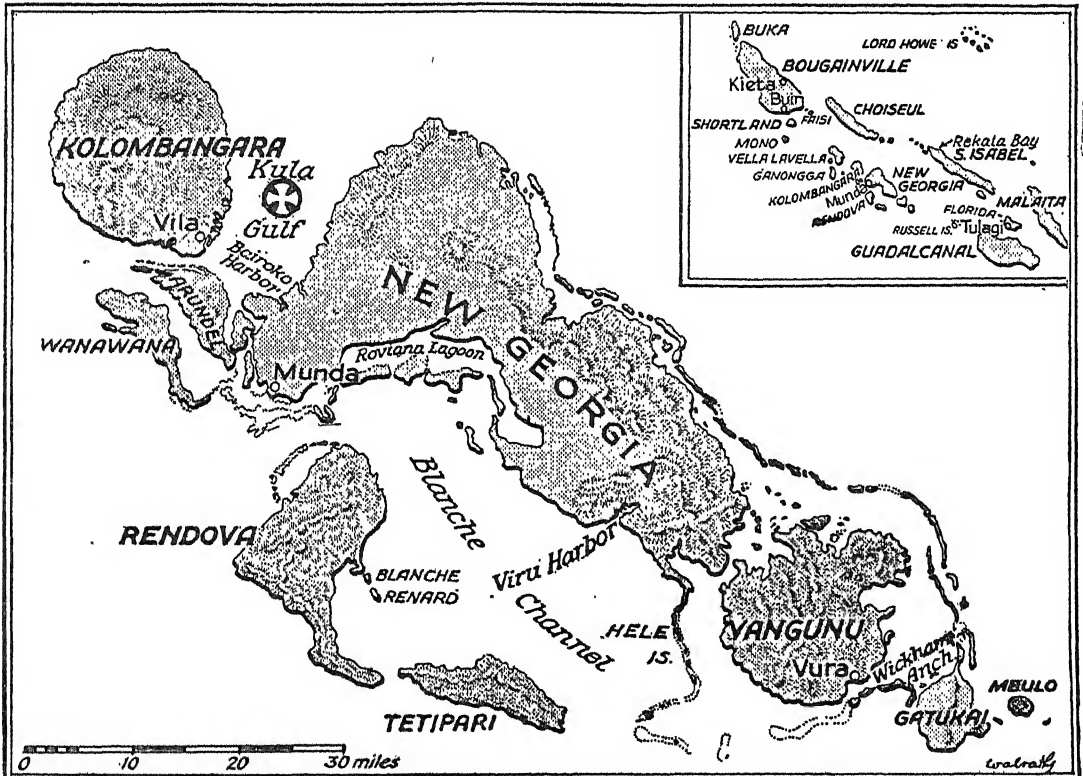
largest air force yet mustered in that region and again caught the Japanese by surprise at Rabaul. Harbor installations were wrecked, 175 planes were destroyed or damaged, and 126 ships hit, including several of fair size. Five American planes were lost in the attack which struck at noon. Once again it was demonstrated that Pearl Harbor disasters cannot be averted even in time of war.

Japanese air strength was obviously being rapidly worn down. In an effort to regain the initiative, Japan sent fresh planes into battle over the whole Southwest Pacific area on the 17th, but only succeeded in losing 104 planes to 2 Allied planes shot down. On the 20th they lost a crowded 8,000-ton transport to air attack off New Ireland. Our Navy announced that thus far 852 Japanese supply boats and 305 warships had been hit by air-naval action.

Late in October the Japanese made repeated efforts to break out of Sattelberg and recover Finschhafen, but were eventually defeated by Australian troops and scattered in the bush.

On the 26th a two-day air attack on Rabaul ruined the Japanese attempt to rehabilitate that base and wrecked another 200 planes in the process, at a cost of 4 Allied planes. More than 900 Japanese aircraft had been destroyed in two weeks. Nevertheless, the Japanese flew in more navy planes from Truk and 60 of these were destroyed on the 28th.

Amphibious American forces occupied the Treasury Islands south of Bougainville Island, last im-



Courtesy of The New York Times

ADMIRAL HALSEY'S ADVANCE IN THE SOLOMONS

After crushing Japanese resistance on Guadalcanal, U.S. and New Zealand air and amphibious forces used the Russell Islands, Rendova, New Georgia, Mono (Treasury), Shortland, and Bougainville islands as stepping stones in their drive against the main enemy base in the South Pacific at Rabaul in New Britain. The cross shows the scene of the naval battles in the Kula Gulf that broke Japanese supply lines to Munda.

portant Japanese base in the Solomons, on October 29, and five days later Empress Augusta Bay was seized, half way up the Bougainville west coast. This brought large new Japanese forces into Rabaul again. They fought fiercely to protect themselves against another air attack on November 4. The Allied raiders lost 9 bombers and 10 fighters, but sank 3 destroyers and 12 merchant ships totaling 50,000 tons and damaged an equal tonnage. In the air 85 Japanese planes were destroyed.

Nevertheless, a convoy of 19 Japanese ships was sighted on the way to Rabaul on November 6 and another air assault on Rabaul, on the 13th, bagged 88 Japanese planes, a cruiser, and two destroyers. Fifteen other warships were damaged. After this, aerial observation indicated that the Japanese were at last beginning to give up the attempt to use Rabaul as a main base and were moving a large part of their forces to Kavieng, New Ireland, 150 miles farther north.

The Japanese also lost a cruiser and four destroyers to naval action, November 5, with an equal number damaged in attempting to reinforce their forces near Empress Augusta Bay.

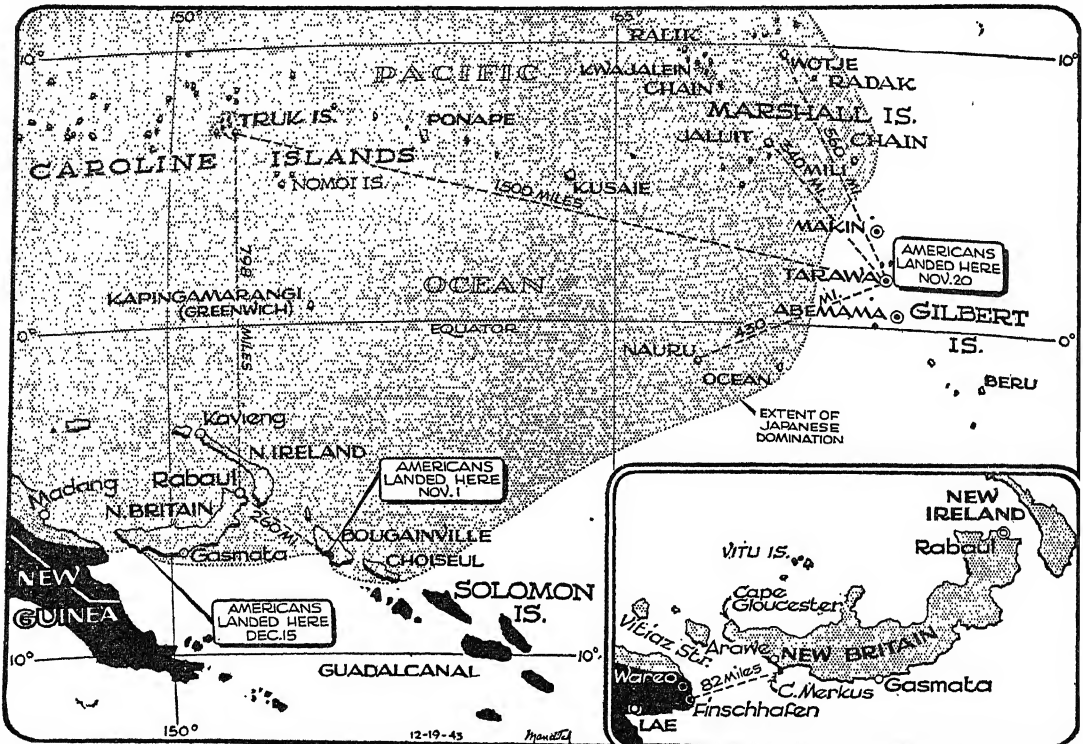
Gilbert Islands Stormed. On November 17 General MacArthur acknowledged that supplies were now being received in larger quantity but declared that less than 10 per cent of current U.S. military shipments were being sent to the Southwest Pacific. The next day, a five-day air assault on the Japanese-occupied Gilbert Islands was begun by the Central Pacific Naval Command and landings were made on the low coral atolls of Makin and Tarawa on the 22nd. The air and naval bombardments had been so heavy, at least 2,000 tons in weight, that

little resistance was expected. On Tarawa atoll, however, the Japanese had constructed such deep shelters that their forces held out against a division of U.S. Marines for some three days. American losses were 1,026 killed and 2,557 wounded—very heavy for the number of men engaged.

After inspecting the Gilberts, Adm. Chester W. Nimitz declared that his forces would go on to Japan through the Central Pacific. Maj. Alexander de Seversky predicted that this would be impractical, due to the many opportunities for Japanese land-based aircraft in this area.

Advances in Southwest Pacific. In mid-December heavy Allied air attacks were made on the western end of New Britain. A new peak was reached when 400 tons of bombs were dropped on Arawe, 50 miles from Cape Gloucester, on the 16th, just prior to an American landing near by, and the Arawe air strip was captured on the 20th. Meanwhile, the bombing of Cape Gloucester proceeded on the new high level. About 2,900 tons were dropped before U.S. Marines on December 26 landed on both sides of Cape Gloucester, cutting off the Japs on the peninsula. Both landings were followed by tardy Japanese air assaults which cost them many planes. Few losses attended any of the landings.

Air fields had now been seized on New Britain for closer assault on Rabaul at the eastern top of the half-moon island. But already the Allied air assault had advanced to pay close attention to Kavieng at the north end of the long, narrow island of New Ireland. Four enemy ships were hit there on December 23 and four days later a Japanese destroyer and two large cargo boats were



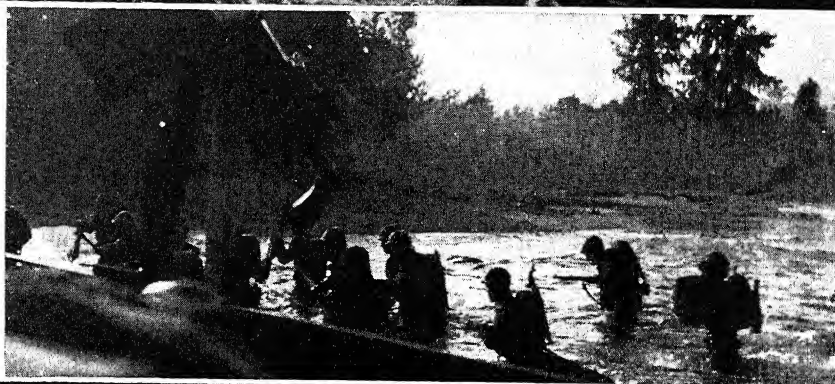
BATTLE LINES IN THE SOUTHWEST PACIFIC

The map shows the extent of Allied advances up to Dec. 19, 1943. On December 26 U.S. Marines made new landings at Cape Gloucester in New Britain.



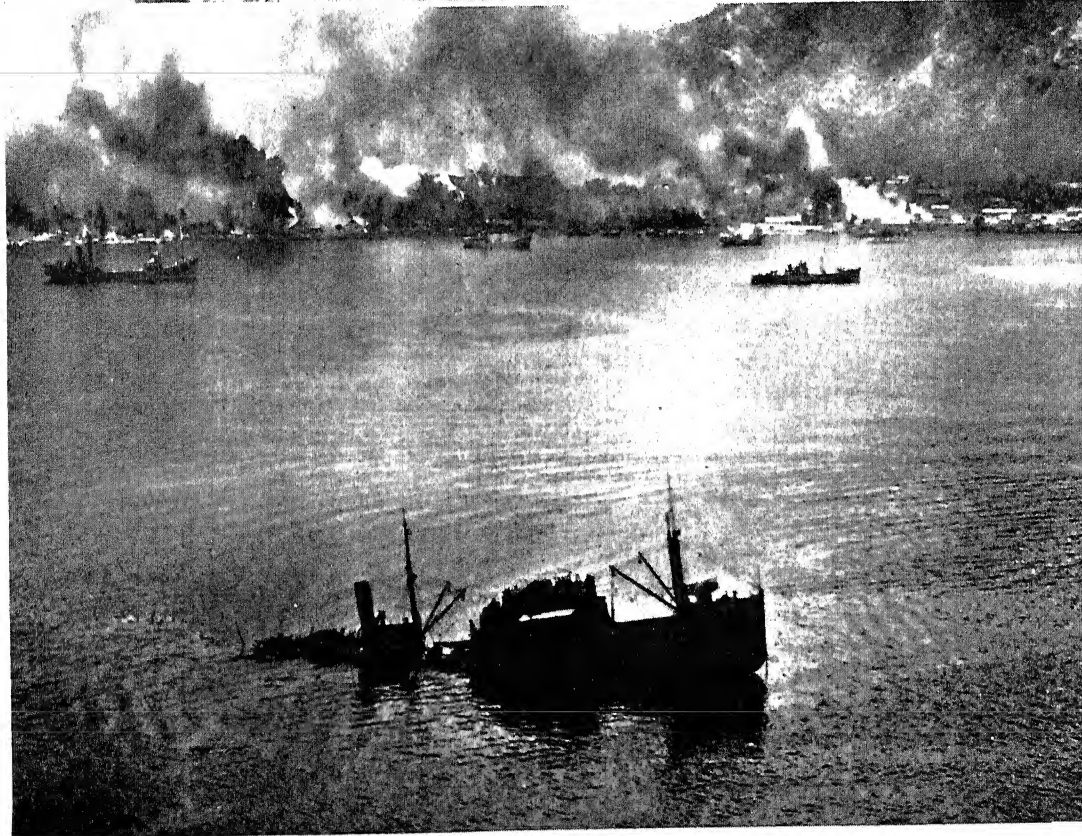
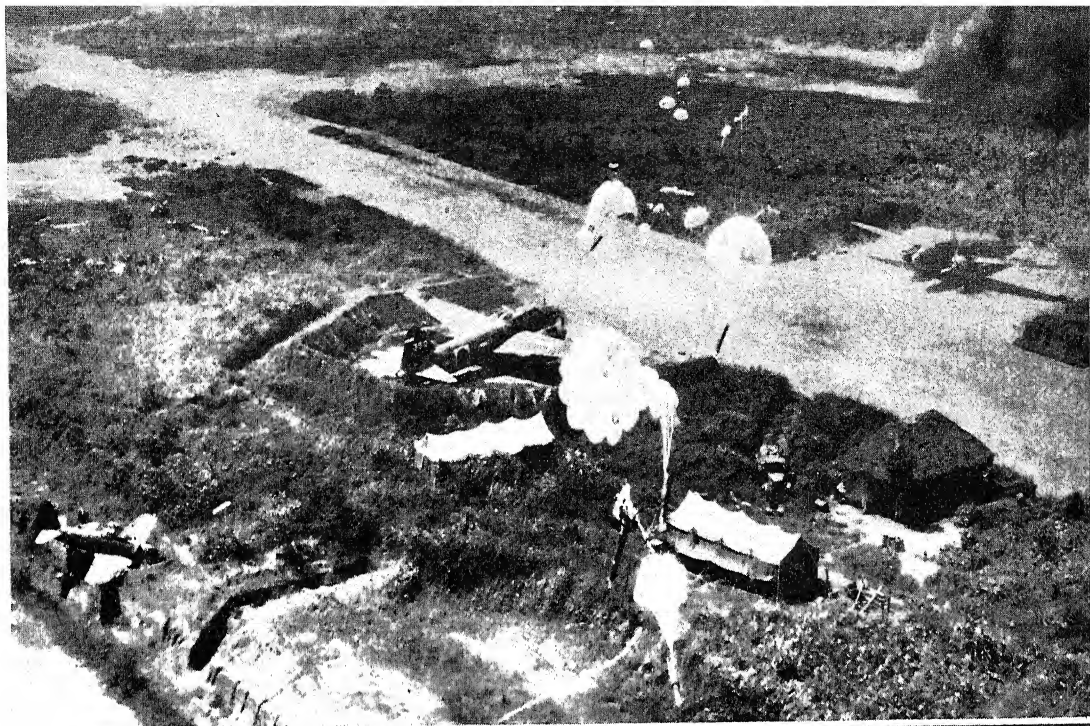
OPERATIONS ON NEW GUINEA

1. U.S. and Australian Air Forces score hits on Japanese airstrip at Lae. 2. Wrecked Japanese aircraft along the strip at Lae. 3. Japanese dead "somewhere in New Guinea." 4. Paratroops land from low-flying carriers. Note the men swinging at extreme angles and very close to the ground. (No. 3 Signal Corps Photo; others U.S. Army Air Forces Photos.)



THE LANDING ON BOUGAINVILLE

Above: Initial wave of U.S. Marines heads for the beach at Empress Augusta Bay (Official U.S. Coast Guard Photo.). Center: Waist deep, debarking Marines head for the beach. (Official U.S. Navy Photo.) Lower left: For thirty hours, Marines and sailors fight flaming gasoline and oil hit by bombs from a Jap plane. (Official U.S. Marine Corps Photo.) Lower right: Marines rush for cover from landing barges. (Official U.S. Coast Guard Photo.)



U.S. Army Air Forces Photos

AIR ATTACKS ON JAPANESE FORCES AT RABAU, NEW BRITAIN

Above: A low-flying U.S. plane drops a line of parachute bombs across a Japanese airstrip. Such bombs prevent self-destruction of attacking bombers from the blasts. Below: Shore fires and some of the 26 Japanese vessels sunk or damaged in the attack of November 2, 1943.



Official U.S. Marine Corps

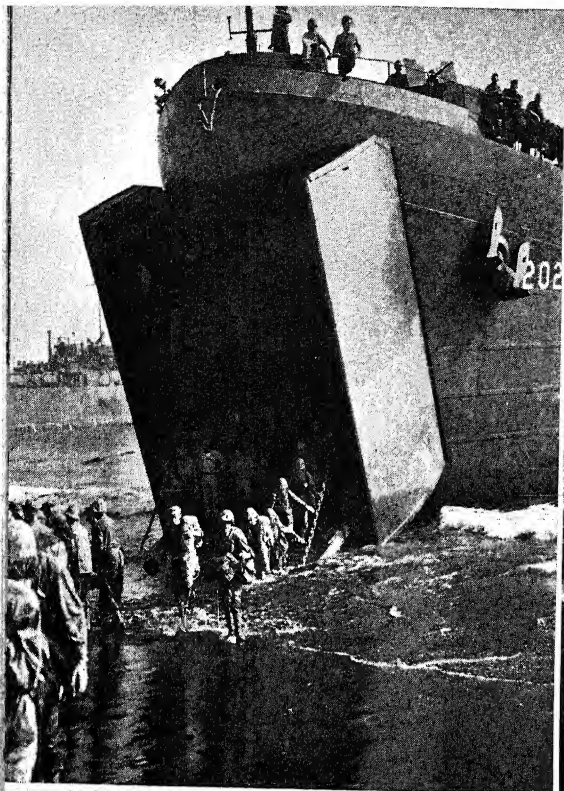
THE CAPTURE OF TARAWA WAS COSTLY

1. On the littered beach Marines cover ammunition and other gear with camouflaged shelter-halves in case of air attacks. 2. Marines swarm up an embankment. 3. From hastily built sand-bag entrenchments, a Marine hurls a grenade against a pill-box. 4. Marines charge and take a hill.



THE CAPTURE OF MAKIN ATOLL

1-2. Troops landed by Navy and Coast Guard advance to continue the attack on Japs already pushed to one end of the atoll. (Official U.S. Coast Guard Photos.) 3-4. Units of the 165th Infantry, 27th Division, —the old "Fighting 69th" of New York—land and make ready for operations. (Signal Corps Photos.)



Official U.S. Coast Guard Photos

THE LANDING AT CAPE GLOUCESTER, NEW BRITAIN

U.S. Marines debark from the open jaws of an LST manned by Coast Guard and Navy, at upper left. Jeeps and litters follow next. Below, an impressive row of LST's, bow doors open, and newly arrived Marines marching up the beach.

sunk. Air losses in the latter engagements were 41 Japanese planes to 11 U.S. carrier-based aircraft.

Allied air superiority was established. However Hansen Baldwin, the military critic of *The New York Times*, observed in *Foreign Affairs* (January, 1944) that "many of the claims of enemy losses—particularly air losses—received from the Southwest Pacific have borne the earmarks of exaggeration." Baldwin concluded also that the statements issued from General MacArthur's headquarters during the year could "mean only one thing: that General MacArthur is dissatisfied with the strategic plan for the war as a whole and for the Pacific in particular, and with the role assigned to him and to his forces. He wants to make the main effort; he does not want to assume a secondary role."

On New Guinea a surprise landing at Saidor on Jan. 3, 1944, far up the coast, quickly gave the Allies a new harbor and airfield, 110 miles north of Finschhafen and 55 miles below the Japanese stronghold at Madang, and encircled intervening Japanese forces.

On December 17 it was announced that four airfields had been developed in the newly conquered Gilbert Islands. Here as elsewhere the Seabees did record time construction work. On the 24th a Japanese 20-ship concentration was spotted in the Marshall Islands which were now being bombed by American forces.

The Japanese were being pushed back in the Southwest Pacific, but as the year ended this theater did not appear to be capable of decisive development, for even if the Philippines were recovered our forces would still be far from the heart of Japan. As in Europe, the Allies had only seized jumping off points from which to attack the enemy.

Routes for Invasion of Japan. The best route of attack upon Japan was the subject of much debate. The slow conquest of the Solomons indicated that the obvious approach from the south was a long undertaking. Direct attack from Hawaii straight across to Japan seemed to involve too great distances. The route of the Aleutians also posed a 2,000-mile hop to Tokyo, unless some of the Kurile Islands could be taken.

These difficulties led to constantly recurring demands, especially from isolationist elements, that Russia come into the war against Japan and give the United States air bases on the Siberian mainland. This demand was alleged to cancel out Russia's cry for a second front in Europe. Others, however, denied its validity, pointing out that the great Japanese army husbanded in Manchuria could quickly cut off the nearest of the coveted air bases, besides involving Russia in a first class war when her strength was already taxed to the limit.

The remaining route of attack, a back door approach through Burma into China, was recognized at the Quebec Conference between President Roosevelt and Prime Minister Churchill in September when Lord Louis Mountbatten was given a command based upon India to cover the Burma-Indo-China-Malaya region.

In the meantime, as Japanese shipping was steadily whittled down and her air force suffered constant decimation, the possibility increased that pressure might be exerted on the enormous Japanese conquests from all sides, after the manner of the constriction of Hitler's swollen empire. This prospect was advanced by the phenomenal naval building in the United States, where the number of naval vessels was increased from 350 to 805 in the two years after Pearl Harbor. A whole navy was completed in 1943. This mighty force com-

bined with the British Navy after the defeat of Germany would give large possibilities for maneuver and concentric pressure, when backed by expanding land and carrier-based aviation.

The vast distances involved nevertheless indicated a long war before the decisions of the Cairo conference in December could be enforced (see UNITED NATIONS for these decisions).

CHINA-BURMA THEATER

The War in China. During the year an increasing number of people looked to the Chinese mainland as the platform from which decisive attacks against Japan could be launched. Yet the China theater had been longest in the war, was most impoverished, and most difficult of all to reach.

In China the Japs had accomplished the maximum of strangulation with a minimum of force. They had seized all the ports, nearly all of the rivers, railroads, and canals. Only short stretches of communication lines, leading from nowhere to nowhere, remained in Chinese hands. With the seizure of the Burma Road in 1942 the last sizeable link with the outside world had been cut. All that remained was a few ancient trails connecting with India through Central Asia.

One of these, the Ledo Road leading to Assam, was the scene of another epic of road building (see CHINA under *History*). Yet even the completion of this road would only open up a new trickle of life-blood to China's poorly equipped armies.

Chennault's Air Epic. Faced with these slender prospects the attempt to fly supplies into China from India had to be made. First came the nuclear planes of General Chennault's 14th American Air Force. Then gasoline and equipment for them and more planes and bombs until a great airfield throbbed deep in the heart of China. It was a fantastic undertaking. Chennault's planes had to make four trips over the 17,000-foot Himalayas to accumulate enough gasoline and supplies for one bombing raid. One plane could bring in four tons of gasoline, but half of this had to be saved for the return trip to Assam. Nevertheless, the project grew slowly and it gave the Chinese hope—and an air cover.

On January 14 Chungking announced the most important victory in months when Sinyang was captured on the Peiping-Hankow Railway. A month later the Japanese began several drives and on March 12 they took the important city of Hwajung in North Hunan, only to lose it again a week later. Presently, too, they were driven from South Yunnan, back into Burma. The Chinese soldiers were clad in their ragged uniforms of various kinds. They wore straw sandals or went barefoot against Japs in fur-lined coats and gloves, but they kept killing Japanese, though not as barbarically as the latter had operated in slaying every man, woman, and child in considerable areas of the China coast in which Doolittle's American fliers had landed in 1942 after bombing Tokyo. This atrocity, announced by Chiang Kai-shek on April 28, took the lives of tens of thousands of people.

First Rice Bowl Invasion. On May 23 the Japanese began one of their periodic incursions into the rice bowls of Hunan and Hupeh provinces in East Central China, but a week later the Chinese announced one of the biggest victories of the war. Five enemy divisions were routed and a record air victory achieved. Thirty-one Japanese planes were accounted for. The Chinese occupied the west bank of the Yangtze for a considerable distance opposite Ichang and in the Lake Tungting region. They claimed 30,000 casualties among the 100,000

Japanese troops which started the invasion. A small number of good fighting planes had made a big difference in the Japanese calculations.

Seven Years of War. On July 7 China began her seventh year of total war. A week later the 14th U.S. Air Force swept the docks at Canton and the Haiphong area of French Indo-China. On August 29 Hong Kong and Canton were bombed on two successive days. Enemy planes totaling 78 were shot down and many destroyed on the ground.

Second Rice Bowl Raid. In mid-November a Japanese force of 80,000 men invaded the rice bowl country to seize or destroy the autumn rice crop. Two columns made a determined effort to encircle Changteh, a city which had balked three previous efforts to take Changsha, capital of Hunan Province, farther south. The fighting was desperate, and on December 3 the Japanese took Changteh, only to be driven out six days later in a general defeat along the entire sector. Entering the city, correspondents found only 30 of the city's 10,000 buildings still standing, and these damaged. In the last days of the year the badly mauled Japanese forces still retreated, but they had taken away large amounts of rice.

The 14th American Air Force aided a Chinese advance toward Hankow in mid-December and bombed Hong Kong and Formosa. China's need to recover contact with the outside world had not diminished. Only when Allied shipping could reach her southern ports again was the real push against Japan likely to be feasible. Also see CHINA under History.

Burma Campaign Organized. In August Lord Louis Mountbatten was appointed commander-in-chief of a new Allied East Asia Command. During the



Courtesy of The New York Times

LIMITS OF ADM. LORD LOUIS MOUNTBATTEN'S EAST ASIA COMMAND

latter months of the year he was engaged in organizing a campaign for the reconquest of Burma from bases in India and Ceylon. Opening the back door into China would be only a partial solution of the problem of getting at Japan, but it would help.

Some military activity began on the India-Burma border in mid-October as the monsoon season waned. British and Indian troops were operating in four widely separated sectors on the long frontier. The R.A.F. and the 10th American Air Force, based on India, raided Japanese bases and communications in Burma throughout 1943. At the end of the year some small Allied land gains had been made in the direction of the port of Akyab on the Bay of Bengal, but the major drive still appeared to be some months distant. See BURMA under History.

Tokyo Still Well Protected. From any angle that the Japanese problem could be viewed it was a knotty one. Japan's doom would eventually come, but barring great aid from Russia, which she might not be able to give, the smashing of Japan's hold on East Asia was a long undertaking.

The great difficulties ahead in the Orient showed how narrowly the North American island had escaped being encircled by two giant gangster empires, each commanding the labor and resources of half a billion people. The size of the task ahead in Asia also buttressed the decision of the Allied governments to smash the more dangerous Nazi Empire first, in order to make sure that both would eventually be liquidated.

Casualties. Up to the end of 1943 American casualties were much lighter than had been anticipated. The dead totaled 33,153, the wounded 49,518, missing 33,617, and prisoners of war 29,898. The latter were mostly the men who had surrendered to the Japanese in the Philippines and were being rapidly exterminated by the enemy.

Three United States officers who escaped and made their way to Australia gave in full detail the story of torture, murder, and starvation which had already killed a third of the 22,300 Americans who surrendered to the Japs and half of the 28,600 Filipino soldiers captured on Bataan. Every form of beastly cruelty had been used to destroy men who were entitled by all civilized law and custom to good treatment, including the same food, quarters and pay which the Japanese troops receive.

Aside from this grisly feature of war in the Orient United States casualties had been lighter in the first two years of the war than in the nineteen months of American participation in the First World War. The dictatorships could and did spend men prodigally, deliberately sending whole armies to their death, as at Stalingrad and later in the Dnieper Bend, if high policy seemed to be aided thereby. The democracies, on the other hand, had to be more circumspect. The Allied commanders tried to win their campaigns with minimum loss of life. They relied heavily upon the great weight of fighting equipment from United States factories to overwhelm the enemy. Nothing could eliminate the sweat and suffering of the infantryman, but the slowness of many campaigns was largely due to a desire to spare him as much as possible.

Among the other Allies casualties ran far higher. British losses were fixed at 514,993 as early as September, 1942, with the dead totalling 92,089. The French still had over a million war prisoners in Germany. Russia had lost 5,000,000 combatants killed and missing, and some 50,000,000 civilians were starved, terrorized, or driven away to Germany. China had estimated 2,300,000 military deaths and five times as many civilians killed by the Japs.

No nation had suffered proportionately more than Poland. Approximately 200,000 soldiers and 500,000 civilians had been killed in Warsaw alone.

In the whole country 3,200,000 people had been slain by the Germans, according to estimates compiled by the *Baltimore Sun*. Two million others had been sent to slave labor in Germany and an equal number deported from Western Poland to Central Poland. Losses in Yugoslavia would be comparable. See also GERMANY, GREAT BRITAIN, JAPAN, and other belligerent countries under *History*. For treatment of war wounded, see *PSYCHOLOGY*.

THE WAR AT SEA

Less was known at the end of 1943 about the war in the waters than about the air and land battles. The sea fighters had to preserve a good deal of secrecy to protect the movements of ships. Their duties also kept them isolated on the high seas much of the time, where it was not easy to announce results. Moreover, most of the achievements of the sea warriors hardly amounted to dramatic news. Plowing over stormy waters for days, averting attacks on convoys by their very presence, driving submarines down without being sure that they were sunk—much of the sailor's life was hard, yet monotonous, performed away from the plaudits of press and microphone.

Until lately, too, this had applied in double degree to the unique service of the merchant seamen. Tough work from port to port, danger all the way, few amenities and no applause was the merchantman's lot, even if he were torpedoed and thrown into a sea of burning oil. Yet the war would come to a halt without his dogged persistence, often from one icy sinking to another. Fortunately, his indispensable role was now being better recognized, in comforts ashore and ashore and in official and public recognition.

Magnified Submarine War. The Germans began this conflict in far better position to wage submarine war than in 1914—when the U-boats almost gave them victory. After Britain had trustingly given them parity in submarines, in the Anglo-German naval treaty of 1935, they plunged ahead with submarine construction until the start of hostilities enabled them to throw a far bigger fleet of subs at Britain's lifelines than in 1914, backed also by much greater building capacity. This huge advantage was then more than doubled by the seizure of the entire coastline of Western Europe, unless an exception should be made of the coasts of Franco Spain and tiny Portugal. No longer were the German subs confined to the narrow egress of the German coastline. With a vast arc of fiords and harbors in their hands and half encircling Britain, her chances of survival seemed small indeed.

Britain's own magnificent courage, plus the 50 destroyers and other aids from the United States, enabled her to live until German efforts to cut off America's ever growing aid necessitated the entry of the United States into the shooting war in the Atlantic, some weeks before Pearl Harbor. Then America suddenly found herself blockaded by packs of submarines sinking ships all along the Atlantic coasts, especially in the southern regions, sometimes within sight of crowds on shore. Even the Gulf of Mexico was invaded.

For months the U.S. Navy was relatively helpless until new escorts and other protective devices could be mobilized. Thereafter, the submarines frequently changed hunting grounds, all over the Atlantic Ocean, north and south, and maintained their killings at a punishing rate. Naturally they were far more formidable weapons than in 1917.

On Feb. 22, 1943, two ships were sunk in the North Atlantic, in spite of efforts to defend them,

and 850 members of the U.S. armed forces were lost. The escort vessels available could not cover all assignments. They put up a great fight to protect the convoys, but swarms of U-boats hung on for days, striking especially at night. Thus on March 17 a convoy battle continued for 72 hours, three subs being sunk.

See **SHIPPING** for discussion of Allied shipping losses.

New Anti-Submarine Devices. By this time two favorable developments greatly increased the safety of the convoys. The British and Canadians worked out a plan for an air umbrella all the way across the North Atlantic which enabled the submarines' deadliest enemies to look down into the waters and swoop instantly on any U-boats which were at or near the surface. Many great land-based planes participated in this new patrol, but the main burden had to be borne by lesser planes issuing from small aircraft carriers, ships of cargo or cruiser size which could be converted more quickly than a huge "flat-top" can be built, and serve a convoy just as well.

Simultaneously, a new type of destroyer-escort was coming off the ways in increasing numbers, the first of 300 projected. The D E is a ship 300 feet long, larger and speedier than the corvette but easier and faster to build than the destroyer. Designed to resist air attack, its superstructure is something between a submarine conning tower and a tank turret, all sheathed in steel except a few small slits. These powerful sub-killers take only three months to build.

During April, losses to the U-boats were still rising. Scores of ships filled with all manner of valuable cargo joined the thousands of others lying on the ocean floor, especially around the British Isles. There was no difficulty in finding a "market" for the goods we produced. But during May the new anti-sub weapons reduced the submarine toll to the smallest since the war began in 1939. Fully 95 per cent of our lend-lease materials were getting through. During the last half of June 15 U-boats were accounted for, in addition to "probables." On July 16 a baby flat-top in port reported fights with 11 U-boats and recorded two as certainly sunk, four "very probably" and four "probably." On August 3, reports came in of a mass attack by 25 submarines being so severely mauled by air and sea escort craft that it was never able to fire torpedoes at a great convoy. Our industrial supremacy was finally asserting itself in submarine fighting, as elsewhere.

The U-boats Mastered. By mid-August the sea war was going well. Shipping losses were moderate and U-boat sinkings heavy. Enemy submarines were destroyed at the rate of one a day for three months. Although 2,500 vessels had been used in the invasion of Sicily, only 80,000 tons of shipping were lost, or ten fair-sized ships. More enemy submarines were sunk during August than Allied vessels in convoys, a sure indication of the upper hand. In September, the U-boats were back, after re-fitting with heavier torpedoes and new anti-aircraft guns, which sometimes enabled them to stay on the surface and fight it out with the planes, but they were not able to redress the balance of armed power against them.

During the first half of September no Allied merchant ship was sunk anywhere in the world, and in the four months preceding September 18 no losses were incurred in the North Atlantic. The next day, however, at least 15 re-armed subs attacked a great convoy and sank a small number of merchant ships and three naval escorts. A larger

number of U-boats was sunk or damaged during the fight, according to a statement by President Roosevelt and Prime Minister Churchill on October 9.

Azores Bases Gained. Three days later the last hope that the submarines might save the Nazis must have been removed when Portugal granted the Allies, at the request of the British, the use of the Azores islands as fighting bases. This diplomatic stroke enabled us to bridge the Atlantic with land based planes. Previously, there had been a gap of some 500 miles in mid-Atlantic, but thereafter ships steaming between the United States, Britain, and Gibraltar would be within reach of the big land patrol airships all the way. The vital oil route between Venezuela and Britain would also be similarly protected.

Submarine Building Blasted. For a long time the Germans had been able to launch submarines faster than the Allies could sink them. Building and docking were frequently protected by "pens" with concrete roofs several feet thick. Nevertheless, our air raids reduced the building of submarines, both by direct attacks on the assembly plants and by blasting the factories where parts were made. At the peak of production it was estimated that the Germans could produce 25 subs a month, but by November 10 it was believed that their production rate had been cut in half. Since 150 submarines had been sunk in the preceding six months, at the rate of 25 a month, the total number of enemy subs appeared to be definitely diminishing. More were certainly being sunk than Allied ships lost, so that both the building and sinking curves were moving against the Germans. Yet the battle continued and the subs were able to put up a stiff fight against two convoys on December 12, with some losses on both sides.

The desperate nature of the war at sea was glimpsed momentarily, on November 11, by the story of the U.S. destroyer *Borie* which battled a disabled U-boat with pistols and shot guns, at ten-foot range, before both ships went down. A month earlier, British midget submarines had made a daring raid into Alten Fjord, Norway, heavily damaging the German battleship *Tirpitz*. Three of the raiders did not return.

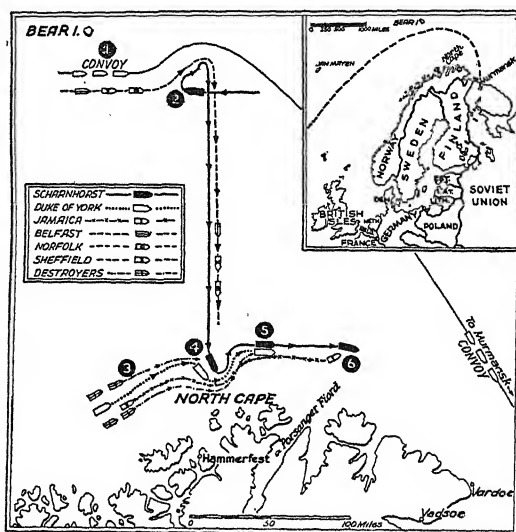
Shipbuilding Supremacy Achieved. Meanwhile, the other arm of the great Allied campaign against the U-boats, our shipyards, was striking home. In 1942 American shipyards managed to turn out an unbelievable total of 8,092,000 tons of cargo ships. That figure was exceeded in the first half of 1943 and by the end of the year we were building ships at the rate of 20,000,000 tons a year. This torrent of new vessels provided more ships for every theater, but above all it supplied the shipping pool to back the great invasion of Western Europe in early 1944, at the time when the elimination of the Italian navy and the opening of the Mediterranean greatly eased the strain on shipping. Under the leadership of a newcomer in shipbuilding, Henry J. Kaiser, the time required to complete a ship dropped from months to a very few weeks. One pre-fabricated ship was actually completed in 13 days.

Yet this is only part of the story of magnificent achievement in shipbuilding, for at the same time our yards were turning out during the year more than 350 warships of all types, enough to comprise a great navy and to indicate an American navy at the close of the war three times as large as Britain's mighty fleet, notwithstanding the fact that the British—no mean shipbuilders themselves—have added greatly to their navy. By agreement

the British have concentrated their yards on naval building, thus begetting a problem in the fair distribution of merchant shipping after the war.

As the year ended both nations resounded with the clang of steel as 80,000 landing barges were rushed to completion for the invasion of Europe. Yet the doom of Japan was not neglected. Huge battleships of 35,000 tons were launched and three 45,000-ton American airplane carriers were begun which would devote their extra space to greatly increased compartmentation, armor, and fire power. Heavier decks would bear bigger planes above an almost unsinkable hull defended by powerful anti-aircraft guns. The New York Navy Yard also found time to recondition the 35,000-ton French battleship *Richelieu* to head the navy of the new France that was taking shape in Algiers. Looking again to the future, the Navy took over the 70-ton flying boat *Mars*, which spread its 200 foot wings for 32 hours and traveled 4,600 miles without refueling, indicating again the scope of air war in any world struggles which may follow this one.

The Scharnhorst Sunk. The waning fortunes of the German Navy were symbolized by the sinking of the 26,000-ton battle-cruiser *Scharnhorst* on De-



Courtesy of The New York Times

SINKING OF THE SCHARNHORST

At dawn of Dec. 26, 1943, as a convoy was steaming southeast of Bear Island (1) on its way to Murmansk the German battleship *Scharnhorst* appeared, making 28 knots toward the laden ships. The convoy was diverted northward and the escorting British cruisers *Norfolk*, *Sheffield* and *Belfast* opened fire. The *Norfolk* scored a hit and the *Scharnhorst* turned off northeastward (2). Later the enemy vessel tried to close in again, but was driven off and sped southward for the Norwegian coast, shadowed by the British ships. Meanwhile the battleship *Duke of York*, which with the cruiser *Jamaica* and four destroyers had been on guard against attacks on the convoy from northern Norway, moved up from the southwest (3). At 4:15 p.m. contact was made, with the *Scharnhorst* on the *Duke's* bow. The *Duke* swung southeastward to fire a broadside and delivered a telling blow (4). The *Scharnhorst* turned north, then east. The destroyers raced to get ahead of her and let go with a torpedo attack while the *Duke* closed in (5). With the enemy ship afire and nearly at a standstill the *Jamaica* torpedoed her and she went down sixty miles northeast of North Cape (6).

ember 26. This famous ship and her sister, the *Gneisenau*, had run the gauntlet of British might through the Straits of Dover in February, 1942, in order to threaten Allied convoys to Russia by the northern route. Finally the temptation of a great convoy brought out the *Scharnhorst*, when other methods had failed. Three small British cruisers on the flank of the convoy gave battle as the merchantmen fled to the north. Then the convoy reformed again and the *Scharnhorst* made another try. This time she was driven back into the waiting guns of the British battleship *Duke of York* and finished off by torpedoes and bombs.

Pincers on Japan. Other warships could now be detached to join the growing forces of Lord Mountbatten in the Indian Ocean, one arm of the great naval pincers pressing on Japan. The bulk of the new American Navy had long been in the Pacific, hoping for a battle with the main Japanese fleet, which was held back to defend the chief Japanese lines of communication. Instead of risking their heavy warships the Japanese fed cruisers and destroyers—protective cover for any battle fleet—into the path of MacArthur's airmen and task forces, losing ships steadily but hoping to gain time.

Time might be won until Germany cracked, yet even before her final collapse armed power would begin to flow from Europe to the Pacific, said Admiral King on December 30, a prediction repeatedly buttressed by earlier British declarations that their whole power would be thrown against Japan when Germany was conquered.

The gambling looked good to the Japanese war lords on the day of Pearl Harbor, and it started off auspiciously. Little more could have been desired in the first two years, were it not for the steady whittling down of Japanese sea strength in the Southwest Pacific and by our submarines on all Jap shipping routes.

If this account of the war in 1943 were written from Tokyo the latter campaign would be the epic of the piece, for American submarines steadily gnawed at Japan's vitals without her being able to smother them as we had the German undersea boats. By the end of 1943 nearly a thousand Japanese ships had been hit, most often by the torpedoes of American submarines whose activities were little known to their own people, except as occasional totals of enemy ships sunk were released. Yet on September 14 only 12 U.S. submarines had been lost in a total of 114 American warships sunk in action since the war began.

Blockade Running. Another phase of the silent war at sea was brought momentarily to attention on December 27 when a German blockade runner neared the coast of southern France, presumably from the Far East. Her cargo must have been heavy with rubber, tungsten, quinine, and other riches in Japanese hands, for 11 German destroyers put out from Bordeaux to bring her in. Three were sunk by British warships and the others driven back before the cargo ship was sunk from the air. She was the twelfth blockade runner to be caught.

Unfortunately for the United Nations a safer channel of blockade running had been opened up through the facilitation of wheat shipments from Argentina to Spain by the British and Americans. This humanitarian traffic soon became established and broadened into other fields, constituting a ready channel for rare materials through Fascist-controlled Argentina and Spain into Germany. Thus in early November, five ships on this run were examined by British blockade authorities

and found to contain drums full of liver extract for Nazi submarine crews, labeled as paste. Others contained six tons of gland extract for the treatment of shock and hidden platinum bars worth a king's ransom to the Germans as an ingredient of nitroglycerine.

THE AIR WAR

In the last week of December, 1943, there were celebrations of the 40th anniversary of the first airplane flight by the Wright brothers at Kitty Hawk, N.C. Measured in years the airplane was very young, but its technical efficiency as a destructive weapon seemed to advance almost in geometric proportions.

During the First World War the airplane was already a formidable fighting tool. It did some light bombing, but its main use was in observation. The planes used then seem incredibly fragile and ineffective when compared with the air giants of 1943, in speed, armor, fire power, and scientific dependability. The four-motored Flying Fortress bristling with 13 guns, some of them small cannon, knocked down fighters in all directions and had to be grievously hurt indeed before it fell to the ground. On July 18, a formation of Fortresses was attacked over Holland by 200 enemy fighters, 50 of which were shot down and only 2 Fortresses were lost.

The great British Lancasters, specializing on bomb power, carried single "block busters" weighing three tons, and four-ton bombs were also being used. Yet these types were already overshadowed by greater planes coming from U.S. assembly lines, which at the end of 1943 was turning out planes of all types at the rate of 9,000 a month, a figure due to rise to 10,000 in 1944, or 120,000 planes annually.

Contemplation of facts like these clearly indicated that another 40 years of "progress" in aviation would make war completely incompatible with urban civilization. Countless Europeans already know that to be true. In January, 1943, the R.A.F. was systematically demolishing the great industrial cities of the German Ruhr. Six times in nine nights the huge bombers rained many hundreds of tons down on the concentrated targets beneath them and they continued until the greatest industrial district in Germany was virtually destroyed, its factories and supporting establishments wrecked or moved to the east. Strategic bombing had already destroyed 30 per cent of Germany's plane production capacity, created bottlenecks in deliveries to all kinds of war plants and dislocated inter-plant communication in hundreds of factories, in addition to smashing factories and blasting salvage work. Allied air staffs usually allowed the Germans to get repairs well along before blasting them again.

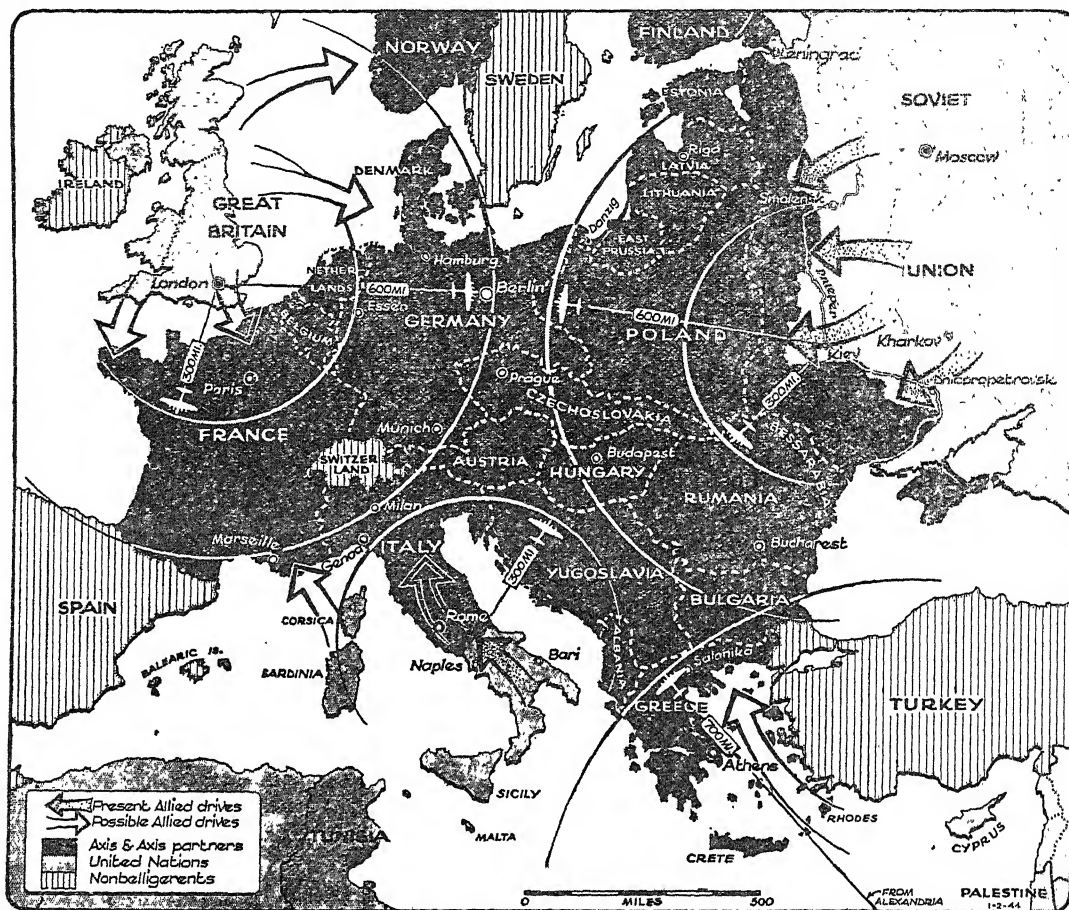
In general, the British preferred night attacks, with heavier bomb loads, while U.S. planes were built for high-level day bombing, depending for accuracy on secret bomb sights which astounded friend and foe alike. The Eighth U.S. Air Force required many months to amass its forces in Britain. It was not until Jan. 27, 1943, that it assayed its first raids on the Reich, striking at Emden. Three days later the R.A.F. made its first daylight raid on Berlin, to disrupt the annual Nazi celebration of their advent to power. The flustered Goebbels hastily betook himself to the cellars and returned to the air an hour later, only to have to flee again as the second wave of British planes came over.

These complimentary raids were followed by the real thing at night on March 28 and 30. To make

life constantly uncertain for the enemy the British had developed Mosquito bombers, small planes made almost entirely of wood and plastics. They carried only small bombs, but could fly at low altitudes and at great speed.

Bombing from Three Directions. The big R.A.F. bombers devastated Nuremberg on March 10 and fired Munich the next night. On April 5, 133 Flying Fortresses wrecked the great Renault truck and tank works near Paris and a similar armada attacked Naples from Africa, while the British dropped 900 tons of bombs on the Krupp plant in Essen and bombed both Kiel and Antwerp. Essen

three. The Russians raided Warsaw, our planes Northern France, and the British rocked Duisburg with the heaviest raid of the war—until May 25, when the R.A.F. loosed more than 2,000 tons on Dortmund, at the rate of 33 tons a minute for an hour. On the 16th a specially rehearsed attack was made on the Eder and Moehne dams which supplied power and water to many German industrial plants. A new explosive was successfully planted and the dams seriously breached. Duesseldorf, where 380 acres of buildings had already been destroyed, was bombed again on May 26, and two days later the Zeiss instrument works at



Courtesy of The New York Times

ALLIED ASSAULTS ON HITLER'S EUROPEAN FORTRESS

The map shows the Russian and Anglo-American drives under way at the end of 1943 and the possible offensives of 1944.

had now received 10,000 tons of high explosives.

These wide sweeping attacks were extended on the 17th as Soviet bombers raided Koenigsburg, our forces smashed the Focke-Wulf plane plant at Bremen, and the R.A.F. raided both the Skoda arms plants at Pilsen, Czechoslovakia, and the chemical area at Mannheim on the upper Rhine. It was the year's heaviest raid for the British and their losses were 55 bombers, a real loss when the highly trained crews are considered, but still under 10 per cent. U.S. losses for the day raised the total to 71 big planes.

In the last half of May the pace of the air war was sharply stepped up. On the 14th and 15th the Americans made four large raids and the British

Jena was hit by Mosquito bombers flying at 200-foot heights. See DAMS.

Allied Superiority Established. By this time 100,000 tons of bombs had fallen on Germany and the Allied air war had greatly relieved the Russian air fighters. At the start of the German attack on Russia the Soviets had had to contend with 10,000 German planes, with 4,000 in reserve. Now 5,000 operating Nazi planes had to cover all Europe, enabling the Russians frequently to destroy three or four planes to one lost. Thus, on June 12, the Russians reported a bag of 752 planes to 212, over a period of several days, and airmen of the U.S. Eighth Air Force enjoyed a similar advantage. In 18 raids during the first half of the year

their bombers shot down 571 Nazi planes and recorded 187 others as probably destroyed and 231 damaged. The American loss was 106 planes. Maj. Gen. Ira C. Eaker, commander of the U.S. Air Force in Britain, reported that his air strength there had doubled in the second quarter and would double again in the third. The same rate of growth was also maintained in the last three months of the year as power was piled up for the great land assault on Western Europe.

To speed this key undertaking complete shore to shore air cover, either carrier borne or land based, was established across the North Atlantic for all convoys.

Cologne and Hamburg Destroyed. During mid-summer the air assault on Western Germany continued night and day. Good weather enabled huge loads of death to be dumped on Germany for eight nights straight during late June. Cologne was given a 2,000-ton blow on June 29 and on July 4 another attack left flames visible for 150 miles. Yet a great city dies slowly. For a long time anger at the damage powers the arms of the people who try to make repairs. It was necessary to drop 1,000 tons on Cologne again on July 9, to crush German attempts to revive a skeletonized industrial life. Previous raids totaling 118 had not been enough. However, as the later months of the year brought no respite for recovery, travelers reported the death of Cologne, and many another Rhineland city. Railroad traffic was still maintained through them but the will to rebuild what was constantly destroyed had been at last extinguished.

In late July, the killing of Hamburg, Germany's greatest seaport, was completed. On the 26th, the R.A.F. dropped 2,500 tons at night and the Eighth U.S.A.F. continued by day. Eight assaults were made in six days. Three of them exceeded 2,300 tons. One of the earlier assaults created such a tremendous fire that a gigantic pillar of flame ascended miles into the sky. The updraft it created was so powerful that it quickly exhausted every particle of oxygen in a large section of the city, dooming the inhabitants to instant death. Tens of thousands of people were cremated, in their air raid shelters or trying to get out of them, so completely that almost no trace of their ashes remained.

Then the follow-up attacks completed the work of demolition in other areas of Hamburg until that city was added to the list of the dead. Photographs showed nine square miles of the town razed, or 75 per cent of its area. Simultaneously, the great American raid on the Ploesti oil fields in Rumania, described above, struck another crippling blow at Germany's war-making power, and lesser raids fell on a dozen other targets in Germany. As the terrible news of the swift destruction of Hamburg moved across Germany with the refugees, in spite of all efforts to isolate the ruined city, panic swept Berlin and kept the Nazis frantically trying to control a mass exodus from the doom which the inhabitants of the capital knew was ahead for them.

Total War. It had not been planned this way when Goering assured the Germans at the start of the war that no hostile plane would ever darken German skies, and when some Americans who had been shown the Luftwaffe wrote off Britain as an air power completely and assured us that the German air force was unconquerable. The destruction of Germany's cities had not been planned when the German air force was hurled en masse at London and other cities in 1940, in an improvised air assault which almost smothered Britain but was turned back by those intrepid British airmen to

whom "so many had never owed so much to so few." When it looked as if the British might be crushed, the German radio had exulted and brushed aside all thoughts of humanitarian compunction.

The German air blitz upon Britain was total war, aimed at morale rather than strategic damage. When it failed, the scientific preparation of Germany's destruction began on the Allied side and it developed through miracles of technical improvement and scientific management of men and materials until the killing of the hundred industrial centers of Germany had been carefully planned and about half of the task executed. It required 50 bomber airfields, each costing \$5,000,000, and requiring 640,000 square yards of deep concrete, to launch a 1,000 plane raid, and the labor of 120,000 men, half of them skilled specialists, to keep the 10,000 airmen able to fly. Real total war demands that the best organizing brains and scientific gains of a nation be employed until its enemies have been rendered impotent.

The fascist-militarist elements in Germany which made war the whole business of life had not looked that far ahead. They had not anticipated U.S. Liberators flying 2,500 miles round trip from bases in Africa, on August 14, to aircraft factories south of Vienna, and blasting 400 new planes neatly parked in rows. They had not expected the shuttle bombing of Regensburg, in southeast Germany, on the 18th, by American planes flying on from Britain to North Africa, or that a secret research plant in a Baltic coast forest would receive a 1,500-ton attack the next day. The inventors of total war had not visualized that on Aug. 19, 1943, 3,000 allied planes would smash 16 targets in Germany in 24 hours, including Berlin for the 71st time. No people is able really to believe that such things will happen to it in the next war of the air age, until the bombs begin to drop on their own cities.

The Razing of Berlin. In late August the serious business of flattening Berlin was well under way. At the Quebec Conference, on August 19, the British Minister of Information phrased the Allied purpose to "bomb and burn and ruthlessly destroy in every way available to us the people responsible for this war." Four days later 700 British and Canadian planes dropped 1,800 tons of bombs on Berlin, devastating four square miles. After that all schools closed, residents fled to the suburbs, and freight cars left the city packed with human cargo. On bad weather days British Mosquito bombers spurred the exodus. These were difficult times for the Nazi regime, but to its great relief the bombed-out people generally rallied to it, believing—doubtless truly—that they would never be compensated for their losses unless Germany won the war.

At this stage the job of softening Germany from the air was believed to be half accomplished, with the second half likely to be achieved more rapidly as the cumulative effects of damage spread. Yet the German system of defense had become very formidable. A network of observers covered Europe itself. On occasion, too, as on August 28, the R.A.F. night raiders encountered great formations of night fighters which made the raid of that date on Nuremberg expensive but did not prevent the bombers from shooting their way through and delivering 1,500 tons of bombs and tens of thousands of incendiaries on the city. The railroad and industrial center of Nuremberg virtually ceased to exist. For war purposes the city in which the Nazis had massed to fulminate the death of Austria,

Czechoslovakia, and Poland was gone. The mammoth structures in which the alleged master race had strutted its prowess could be left as melancholy reminders of the days when weak nations were cheaply killed or enslaved.

The German defense stiffened. Dwindling resources went into fighter planes and anti-aircraft guns increased greatly in number. Nevertheless, the raiders came through. Few of their attacks were made on a straight line. New courses were carefully plotted for each raid, with due regard to German fighter bases and other factors. On the way to Berlin the vast waves of bombers sometimes flew southeast from Britain and then swung to the northeast. At other times they went over Denmark and came in from the Baltic Sea, crossing a different point on the German coast each night. When it was advisable, Mosquito planes slipped over Germany in advance to provide late weather information.

Against this kind of scientific attack backed by great industrial power the defense forces may be huge in extent and devoted in their efforts—indeed millions of men must be used to man the defense—but the attack nevertheless comes and the damage is done, damage which cumulatively saps the ability to go on.

Damage to German military morale was also probably cumulative as the troops learned that their families back home were in constant danger of the utmost gravity. At the front, too, the soldiers suffered from lack of air cover and blamed the Luftwaffe for not supplying it. This was quite successfully countered, however, by stories that the German planes were away bombing New York, tales accepted by the regimented minds of the Germans to such an extent that German prisoners passing through New York City expressed surprise that the place had been so quickly rebuilt.

Increasingly Heavy Attacks and Losses. The air war in the last quarter of the year was a story of new records in the weight of the attack on Germany, as planes piled up in Britain and the Mediterranean area. Sometimes a blanket of raiders covered many areas in France, hitting at canals, railways, and selected industrial targets. Most often perhaps, it was the industrial heart of a city which was selected. Frankfurt on the Main burned for days after an attack on October 4, and was repeatedly assaulted thereafter. Once in a while the Germans hit back weakly, as when they deposited 30 tons of bombs on the London area on October 9, but the Germans were scarcely able to return a ton of bombs for each 200 received.

Occasionally, also, the Allies paid heavily in planes lost. A daylight raid on Germany's ball-bearing plant at Schweinfurt, on October 14, cost 60 Flying Fortresses and 593 men, but Gen. H. H. Arnold declared the attack was worth the price. In London it was estimated that the loss of the plant would eventually cut German war production in half, especially since lesser ball-bearing plants in Europe were also bombed. Attacks on other key targets deep in Germany would bring us still heavier losses, warned Maj. Gen. Frederick Anderson, Jr., on December 28.

The locomotive and aircraft city of Kassel was hit in force October 21. By November 4 the Eighth Air Force was able to send over 1,000 planes on single missions. The next day a new record was set when Duesseldorf and Wilhelmshaven received 4,000 tons in 24 hours. Likewise on the 18th, the Northwest Africa Air Forces celebrated their first birthday by attacking targets in France, Yugoslavia, and Greece. A little later the

Africa bombers penetrated to the Munich region and they frequently bombed the railroad towns on both sides of the Brenner pass. The airplane repair base at Kjeller, Norway, was destroyed November 19, as Berlin was hit by 350 block busters. Equally heavy attacks at three-day intervals kept the German capital burning for ten days as the R.A.F. bomber command revealed that it had set aside 50,000 tons of bombs with which to wipe Berlin off the map as a governmental and industrial city. In late November, 6,000 tons were dropped on the city in eight days, making 500,000 people homeless. A heavy attack on December 4 left fires visible for 200 miles, but a cloud of 500 German night fighters took a toll of 41 R.A.F. bombers.

Turning the tables, American bombers shot down 138 enemy fighters in a day raid on Emden, December 12. On the 17th it was revealed that the Germans had had a real inning at Bari in southern Italy where 30 of their bombers sank 17 allied ships in harbor and largely wrecked the port when two ammunition ships blew up. Meanwhile, Allied planes had staged repeated raids on Emden, Leipzig, and many other German cities.

On December 22 all tonnage records of bombs dropped on Germany were exceeded and this scale of attack was maintained until Christmas Eve. The number of attacking planes rose to 3,000, as the Allies sought to demolish possible rocket gun emplacements on the invasion coast and soften it further for the great invasion by land. On December 29 the raiding of Berlin was resumed in one of the heaviest attacks of the war. After it a Swedish correspondent wrote, graphically but probably prematurely: "We now live in a ruined city in which there is nothing left to bomb."

By this time the Tehran Conference had settled finally the date of the grand invasion from Britain and the fact that air war alone was too slow a process to be depended on for victory. The land forces would have to deliver the final blow. See UNITED NATIONS for the commanders appointed to lead the Anglo-American invasion of Axis Europe.

Toward Inter-Continental War. Yet as the year closed the constant expansion of air power, both quantitatively and qualitatively, indicated strongly that air war would play a still more terrible part in any Third World War. A method of bombing through thick clouds had just been worked out—at heavy cost to residential areas, the Germans said. In the realm of the unquestionable the United States had made 134,000 military aircraft in the two years since Pearl Harbor, a figure which would be almost doubled in 1944. The great B-29 superbomber, so large that it would reduce the Flying Forts to the medium bomber class, was already in quantity production and training. Yet on December 23 the chairman of the House Military Affairs Committee announced that he had seen a still greater bomber than the B-29 giant in production, one designed especially for use against Japan.

The choice between abolishing war or being destroyed by it was rapidly becoming inescapable.

The military campaigns are further analyzed in the articles on AERONAUTICS; MILITARY PROGRESS; and NAVAL PROGRESS. See also each of the belligerent countries and ALASKA, BURMA, CORSICA, HAWAII, ICELAND, LIBYA, NETHERLANDS EAST INDIES, and TUNISIA, under *History*. For strategy and planning see PAN AMERICANISM, UNITED NATIONS, UNITED STATES. For the many other aspects of the war, see the articles and cross references alphabetized under WAR, as WAR BONDS, WAR CRIMES,

WAR EXPENDITURES, WAR PRODUCTION, etc., and the repercussions described under each of the neutral countries and colonial dependencies.

D. F. FLEMING.

WPA. See WORK PROJECTS ADMINISTRATION.

WPB. See WAR PRODUCTION BOARD.

WRA. See WAR RELOCATION AUTHORITY.

WYOMING. A mountain State. Area: 97,914 sq. mi. Population: 250,742 (1940 census); 228,917 (1943 nonmilitary estimate).

Statistics. Statistical information pertaining to each of the 48 States and the District of Columbia has been assembled in comparative tables which appear in the following articles. AGRICULTURE; MINERAL PRODUCTION; ROADS AND STREETS; SCHOOLS; SOCIAL SECURITY BOARD; TAXATION; UNIVERSITIES; and VITAL STATISTICS. The census of manufactures has been suspended for the time being; for the latest information, see 1941 YEAR BOOK, p. 430.

Elections. See the article ELECTIONS IN THE UNITED STATES; also, for incumbents, HOUSE OF REPRESENTATIVES and SENATE.

Legislation. See the separate article on STATE LEGISLATION.

Officers. The Governor is Lester C. Hunt (Dem.), inaugurated in January, 1943, for a four-year term; Secretary of State, Mart T. Christensen; Attorney General, Louis J. Marr. See AQUEDUCTS; BENTONITE.

X-RAYS. See PHYSICS under *Hundred Million Volt X-Rays* and *Quantum of Energy*; also, ELECTRICAL INDUSTRIES.

YACHTING. A wave of uncertainty threatened to wash over yachting in the spring of 1943. Hundreds of the larger craft had been taken over by the government, many skippers had entered the Navy or some other branch of the armed services and others were anchored to their desks by the pressure of business. But the sport's value in training men for the sea, and the fact that it required no materials essential to the national war effort, encouraged a few of our more "daring" yachtsmen to go ahead with plans for limited racing and their optimism was greatly rewarded. Soon boats were put overboard along our three coast lines and on inland lakes with the result that yachtsmen (warned to avoid the shipping lanes) enjoyed a really good season.

Class championships on Long Island Sound attracted 1,265 starts, only two fewer than in 1942. Then there were several special and club regattas. Larchmont Race Week was cut to five days of racing, but had 546 starts in all. And international racing did not fade completely from the picture as fleet leaders of the Star Class visited Great South Bay and, with sailing boats loaned by local skippers, put on their annual title races. Nineteen crews competed, with Arthur M. Deacon of the Western Sound Fleet winning to give the East victory for the first time in seven years.

On Long Island Sound, Arthur P. Davis took the International Class group title with his sloop *Patricia* while Arthur Knapp, Jr., led with *Four Winds* in the special series and was top scorer in that combined with the championship. John S. Sutphen, Jr., sailed his sloop *Teal* to Atlantic Class honors and Philip S. Patton was the Class S leader with *Kandahar*. Patton also captured the Herreshoff Trophy in a special series covering the season. Cornelius Shields won the Sparkman Trophy

in the International Class spring and fall races.

The Atlantic Coast Star Class laurels went to Horace Havemeyer, sailing the *Gull*, and Harold C. Halsted, in the *Chuckie V*, took the Corry Trophy for Stars in Great South Bay's Race Week. George May, Howard Seymour, W. O. Olsen, and T. S. Clark were victors during Manhasset Bay Race Week.

Ralph L. Evans, Jr., of M.I.T. sailed off to the intercollegiate championship, finishing first in the racing held off Marblehead, Mass., for the McMullan Trophy.

THOMAS V. HANEY.

YAP. An island cluster in the western Caroline group of the Japanese Pacific Islands (q.v.). It comprises three main islands within a lagoon formed by an outer band of islets. Area, 83 square miles. Population (1938), 6,939 (5,811 natives, 1,119 Japanese, and 9 others). Yap and Palau are administrative centers for the western Carolines.

YEMEN. See under ARABIA.

YOUTH PROBLEMS. See CHILDREN'S BUREAU; JUVENILE DELINQUENCY.

YR-4. See AERONAUTICS under *The Helicopter*.

YUGOSLAVIA. A kingdom in the Balkans; occupied by German, Italian, Hungarian, and Bulgarian military forces in 1941. The capital was temporarily removed from Belgrade to London, England, on June 21, 1941, and to Cairo, Egypt, in 1943. Sovereign, Peter II, who was proclaimed King upon the assassination of his father, Alexander I, on Oct. 9, 1934, and who ruled through a regency until the anti-German revolt of Mar. 27, 1941, placed the royal prerogatives in his hands.

Area and Population. On Jan. 1, 1941, Yugoslavia had an area of 95,576 square miles and an estimated population of 15,920,000 (13,934,038 at the 1931 census). Four-fifths of the inhabitants were classified as rural. The autonomous Banovina (Province) of Croatia comprised 25,634 square miles and 4,403,199 inhabitants (Croats, 3,325,830). The 1931 census populations of the chief cities were: Belgrade, 266,849; Zagreb, capital of Croatia, 185,581; Subotica, 100,058; Ljubljana, capital of Slovenia, 79,056; Sarajevo, 78,173; Skopje, 64,737; Novi Sad, 63,985.

The Partition. Following the invasion and occupation of Yugoslavia by the Axis Powers during Apr. 6-18, 1941, the kingdom was partitioned as follows. The Banovina of Croatia and adjoining areas were proclaimed on Apr. 10, 1941, a separate state under Italian protection (capital, Zagreb). According to Croat sources, the new State had an area of 39,500 square miles and a population of 6,663,000 on Dec. 31, 1941. On May 3, 1941, Italy annexed about 1,800 square miles of territory with 305,000 inhabitants from Slovenia, and on May 20, 1941, the Dalmatian coast of Yugoslavia and most of its Adriatic islands (about 2,500 square miles with 402,000 inhabitants) were incorporated in Italy.

Hungarian troops moved in on the heels of the invading Germans and occupied about 4,600 square miles of territory (with 1,026,000 inhabitants as of Oct. 10, 1941), comprising most of the districts of Backa and Banat ceded to Yugoslavia by Hungary in the Treaty of Trianon (June 4, 1920). Bulgaria occupied a large part of Yugoslav Macedonia. Italy extended the boundaries of the puppet state of Albania eastward to include the Kossovo district of Yugoslavia (area about 2,200 square miles with 387,000 inhabitants in 1931), thus es-

establishing a common frontier with Bulgaria. On July 12, 1941, an Italian-sponsored "constituent assembly" at Cetinje proclaimed the independence of Montenegro (area, about 3,733 square miles; population, 200,000) under Italian protection. Germany annexed Northern Slovenia on Oct. 1, 1942. Serbia, reduced to approximately its 1912 boundaries of some 36,937 square miles, and part of the Banat remained under German military occupation. The occupational authorities in Serbia controlled the civil administration through a puppet government headed by Gen. Milan Neditch, which was established Aug. 29, 1941. For changes during 1943, see below under *History*.

Religion and Education. According to the 1931 census, there were 6,785,501 members of the Serbian Orthodox Church (48.70 per cent of the total population), 5,217,910 Roman Catholics (37.45 per cent), 1,561,166 Moslems (11.2 per cent), 231,169 Protestants (1.66 per cent), 68,405 Jews (0.49 per cent), and 44,671 Greek Catholics (0.32 per cent). Primary education was compulsory and, in government schools, free. School enrollment in 1938-39 was: Elementary, 1,474,224; secondary, 177,034; university, 16,969.

Production. Four-fifths of the population normally engages in agriculture, and about 80 per cent of the cultivated area is devoted to cereals. Yields of the chief cereal crops in 1940 were (in metric tons): Corn, about 5,000,000; wheat, 1,900,000; barley, 200,000; rye, 200,000. Other important crops were (metric tons): Beet sugar, 108,000 (1939); tobacco, 15,400 (1939); hemp, 53,500 (1939); potatoes, 17,016,000 (1938). Plums and other fruit are widely grown. Livestock in 1939 included 4,224,595 cattle, 10,153,798 sheep, 1,273,359 horses, 19,475 mules, 1,866,141 goats, and 3,503,454 swine. Mineral output in 1940 was (metric tons): Lignite, 6,888,000; copper, smelter, 43,200; lead, smelter, 32,400; zinc, smelter, 6,000; bauxite, about 150,000; chromite, 60,000; iron ore, 600,000; pig iron, 60,000; manganese ore, 6,000; antimony, 3,350; aluminum, 2,800. There were 3,054 industrial enterprises in 1938 and their employees numbered about 400,000 in 1940. Leading industries included timber, textiles, milling, tanning, cement, leather goods, chemicals, steel, brewing, and sugar refining.

Foreign Trade. The value of merchandise imports in 1940 was 6,018,000,000 dinars; exports, 6,680,400,000. For distribution and character of 1939 trade, see *YEAR BOOK* for 1940.

Finance. Budget expenditure authorized for the 1940-41 fiscal year (ended March 31) was 14,708,200,000 dinars, as against actual expenditures of 12,327,900,000 dinars in 1939-40. Public debt on Mar. 31, 1939, 24,620,000,000 dinars (internal, 10,420,000,000). The states which partitioned Yugoslavia signed an agreement in Berlin on July 22, 1942, apportioning the Yugoslav debt among them as follows: Croatia, 42 per cent; Serbia, 29 per cent; Italy, Hungary, and Bulgaria, 8 per cent each; and Germany, 5 per cent. This agreement stated the internal debt of Yugoslavia to be 30,533,000,000 dinars. The average exchange rate of the dinar was \$0.0227 in 1939, \$0.0225 in 1940.

Transportation. There were 6,591 miles of railway in 1939 (6,000 miles operated by the state). Highways extended 26,534 miles (see *ROADS AND STREETS*). The Danube and other rivers are important traffic arteries.

Government. The Constitution of Sept. 3, 1931, proclaimed Yugoslavia a hereditary, constitutional monarchy. It vested executive power in the King, acting through a Ministry appointed by him and

not responsible to Parliament. Legislative power was shared by the King and Parliament. There was a Senate of 84 members, half elected and half appointed by the Crown for terms of six years. The Lower Chamber (*Skupshтина*) of 371 elective members was dissolved Aug. 26, 1939, and new elections were still pending when the German-Italian invasion occurred in 1941. The kingdom was subdivided administratively into nine banovinas (provinces), each under a governor (*ban*) appointed by the Crown. By a decree of Aug. 26, 1939, the Banovina of Croatia (*Hrvatska*) obtained full autonomy in all purely provincial matters (see *YEAR BOOK* for 1939, p. 815), and it was agreed that similar powers were to be extended to other parts of the kingdom.

Upon the outbreak of World War II, the Regency headed by King Peter's uncle, Prince Paul, and the Cabinet adopted a policy of neutrality. On Mar. 25, 1941, Prince Paul and Premier Dragisha Cvetkovitch capitulated to strong German pressure and adhered to the German-Italian-Japanese military alliance. They received in return a German-Italian pledge to respect "the sovereignty and territorial integrity of Yugoslavia at all times," but agreed to permit the shipment via Yugoslavia of German munitions and war materials destined for use against the Greeks. Opposition to this policy led to the military revolt of Mar. 27, 1941, which ousted the Regency and the Cvetkovitch Government. On March 28 King Peter was invested with the ruling powers and Gen. Dushan Simovitch, leader of the revolt, formed a new Government containing representatives of all the principal racial groups and political parties. The King and the Simovitch Government were driven into exile by the successful German-Italian invasion, beginning Apr. 6, 1941. A new coalition government headed by Dr. Slovdan Yovanovitch was formed Jan. 12, 1942. See below for developments during 1943. For Yugoslav war declarations, see table under *WORLD WAR*.

HISTORY

Rise of the Partisans. The year 1943 was a momentous one in Yugoslav history. It saw the rise of a powerful new guerrilla resistance movement, the Yugoslav People's Army of Liberation, or Partisans, led by Josip Broz, a Croatian metal worker and Communist organizer more widely known as "Tito." Broz and his Partisans organized the most effective guerrilla movement in Europe. They made spectacular progress, considering the great difficulties involved, toward driving the Axis invaders from Yugoslavia. They appeared to have supplanted Gen. Draja Mikhailovitch, War Minister of the Yugoslav Government-in-Exile, and his rival Chetnik guerrilla forces both in popularity at home and in the degree of material support accorded by Britain, the United States, and Russia.

In November Broz capped his sensational achievements by setting up a provisional revolutionary government in opposition to the Yugoslav Government-in-Exile and making a bold bid to supersede King Peter's conservative monarchical regime. By the end of the year it was clear that a social and political revolution of sweeping proportions, deriving its main inspiration from the Soviet Union, was under way in war-torn Yugoslavia.

Background of Movement. The story of the origin and rise of the Partisan movement was told by C. L. Sulzberger of *The New York Times* in the Dec. 22, 1943, issue of that newspaper. According to this account, Broz began organizing the

movement in April, 1941, immediately after Germany and its allies invaded and occupied the kingdom. He had deserted from the Austrian army in Russia during the first World War, fought in a Yugoslav battalion with the Russians, became a Communist, and returned to Croatia in 1924 to organize the metal workers in the Zagreb railway shops. This led to his imprisonment for some years by King Alexander's illiberal regime. Upon his release he lived the life of a "political undesirable," in constant fear of arrest, until the Axis invasion.

Led by Yugoslav Communists under the direction of Broz, the Partisans launched their first attacks upon the occupationary forces on July 5, 1941, a short time after the German invasion of the Soviet Union. The Germans had withdrawn many garrison troops for service in Russia and the Partisan risings, like those led by General Mikhailovitch and other guerrilla leaders, attained early success. Partisan bands seized control of most of Montenegro immediately and recruits, most of them non-Communists, flocked to their banners from Croatia and Slovenia as well as from Serbia. Major Arbo Jovanovitch of the regular Yugoslav General Staff became Broz's Chief of Staff.

In October, 1941, Broz proposed a joint command for the Partisans and Mikhailovitch's Chetniks but the negotiations were broken off in November during a German attack upon the Partisan headquarters at Uzice, which inflicted the first of many setbacks upon the movement. The Chetnik and Partisan bands had already clashed on various occasions, and after the failure of the Broz-Mikhailovitch negotiations, the rival movements waged war upon each other as ferociously as upon the Axis occupationary forces. There was some evidence that elements among both Chetniks and Partisans on occasions assisted Axis forces, particularly the Italians, in attacks upon the rival guerrilla movements.

Driven from Uzice, Broz went to Foca in Bosnia and built up the Partisan movement until ousted by another German offensive in May, 1942. Time after time the Axis forces sought to round up and exterminate the Partisan bands. But despite heavy losses and intense suffering from hunger and cold, the Partisans broke out from each encirclement and by a series of successful guerrilla campaigns secured control over large sections of Slovenia, Croatia, Lordun, Lika, Gorski, Cattaro, west Bosnia, and Dalmatia by the end of 1942.

In November of that year, Broz convened an "anti-Fascist Assembly for the People's Liberation in Yugoslavia" at Bihac in northern Bosnia, where temporary executive and legislative organs were created to govern the liberated areas. Dr. Ivan Ribar, former president of the Yugoslav Chamber of Deputies, was named head of a political executive committee. No attempt was made at that time to assume supreme governmental powers. At the same time the Partisan guerrilla detachments were organized on a formal basis as the "People's Army of Liberation."

The basis of the Partisan movement—the unity and equality of all Yugoslav peoples—was formally incorporated in the political and military set-ups created at Bihac. According to various indications, the refusal of Mikhailovitch and of Serb nationalist elements in the Government-in-Exile to accept the principle of federation on the basis of equality of all Yugoslav peoples was a basic cause of continued political strife and civil warfare. The Serb nationalists were unwilling to for-

give the betrayal of Yugoslavia by some Croat elements at the time of the German invasion and the subsequent large-scale massacres of Serbs by Croats collaborating with Ante Pavelitch's pro-Axis puppet regime at Zagreb (see 1942 and 1943 YEAR BOOKS).

Partisan Gains in 1943. Early in 1943 another offensive by German and allied Axis forces drove Broz and five of his best divisions southward from the Bihac area into Montenegro under constant land and air attacks. After a brief pause the Germans renewed their attempt to wipe out the main Partisan concentration in Montenegro in May with seven German and five Italian divisions in addition to Croat Ustachi forces. A British military mission parachuted down to join Broz on May 27 in the midst of the fighting, which lasted for 40 days. Again Broz led his hard-fighting units out of the Axis trap, driving northwestward into Bosnia and establishing a new headquarters at Jajce in July.

The Partisans received a respite from German attacks and a great opportunity to expand their strength through the Anglo-American invasion of Sicily and the Italian mainland, the overthrow of Mussolini, and the capitulation of the Badoglio Government. The Germans were forced to spread their forces in the Balkans thin in taking over control of areas formerly under Italian occupation. Broz and his followers seized the opportunity to disarm many of the Italian divisions and to launch new offensives with fresh divisions equipped with captured Italian arms and supplies.

Sections of the Dalmatian coast were liberated temporarily, opening a way for the shipment of British and American supplies to the Partisans from southern Italy. There was a mass revolt against the Axis in Slovenia and local forces joined the Partisans in attacks upon Trieste, the seizure of Fiume, and other invasions of Italian, Austrian, and Hungarian territory. However the action of the Partisans in establishing their own administration in newly liberated territories led to renewed clashes with General Mikhailovitch's Chetniks, who were likewise on the offensive against the Germans.

The Germans reacted strongly against the Yugoslav guerrillas during the last months of the year. They rushed reinforcements to the Balkans, restored control over most of the Dalmatian coast, and began a series of heavy offensives against both Partisan and Chetnik-controlled areas in the interior. On December 14 the Free Yugoslavia (Partisan) radio broadcasting station reported that Broz's forces were engaged in the heaviest defensive fighting since they began guerrilla activities against the Germans. The military situation at the year's end was vague. Berlin claimed that the sixth major offensive against the Partisans had "thoroughly liquidated" their activities in Bosnia, Montenegro, and Albania, while communiques broadcast by Broz claimed that his forces were on the offensive in Hercegovina, Montenegro, and parts of Bosnia, and were registering successes elsewhere.

During the last quarter of the year the Partisans received considerable quantities of technical equipment and medical supplies as well as arms from the Allied forces in Italy. The guerrillas also were aided by repeated Allied air and sea attacks upon German-held bases in Yugoslavia. On December 20 it was announced from Cairo that a Partisan military mission had arrived in Alexandria in search of additional equipment from the Allies and to discuss future military operations.

The mission was accompanied by Brig. Fitzroy H. R. MacLean, British chief of the Allied liaison mission to Broz's headquarters.

Partisan Regime Established. Meanwhile Broz had seized the opportunity presented by the events of September and after to establish a provisional government. According to Partisan sources, "popular elections" were held in Partisan-controlled districts near the end of September. Delegates chosen included 572 representatives from Slovenia and 96 from other parts of Yugoslavia. These delegates reportedly met in the first Partisan Assembly on October 1-3, at which a plenary committee of 120 members was selected. From the latter committee, 40 members were chosen to serve as the Yugoslav Anti-Fascist Council, or executive arm of the Partisan movement.

This temporary organization was proclaimed the provisional government of Yugoslavia at a meeting of 142 delegates held late in November at Jajce. According to the somewhat conflicting reports issued concerning the new government, it was organized along Soviet lines, with a presidium (plenary legislative committee) of 67 members headed by Ivan Ribar, Sr., a prominent Croat lawyer, and an executive committee or cabinet (the Anti-Fascist Council) headed by Broz, who also became Minister of War and chief of a new Council of Defense. Broz also retained his post as Commander in Chief of the Partisan armed forces and was formally invested with the title of Marshal.

Other members of the government were: Vice Presidents of the Presidium, Josip Rus, a Slovene and former High Court judge in Ljubljana, Dr. Mosa Pijde, Serbian Jewish physician and Communist leader, and Ivan Augustinitch, a sculptor from Zagreb; Minister of Foreign Affairs, Dr. Josip Smoljaka, a lawyer and former Yugoslav Senator from Spalato, Dalmatia; Minister of Interior, Vlado Zecevitich, an Orthodox priest from central Serbia; Minister of Reconstruction, Rade Pribicevitich, Serbian lawyer from Croatia; Minister of Forestry and Mines, Sulejman Filipovitich, a Bosnian Moslem; vice chairmen of the National Defense Council, Vlado Ribnikar, former publisher of the Belgrade newspaper *Politika*, and Bozidar Magovas, editor of the Croatian Peasant party journal. The composition of the Partisan governmental organs indicated that the movement drew its support from all sections of the population. Yet it apparently lacked the support of Dr. Vladimir Matchek, leader of the Croatian Peasant party, as well as of the other prewar political parties.

In a statement of policy adopted on November 29, the new government pledged itself to establish a democratic Federal state after the war and reserved the right to review all treaties and commitments made by the Yugoslav Government-in-Exile. It declared it would not recognize any future obligations assumed by King Peter's Government and formally requested the Allied powers to grant it recognition as the legal government of Yugoslavia in place of the King and his emigre Government.

The only reply to this demand for diplomatic recognition up to the end of 1943 was Moscow's announcement that a Russian military mission would be sent to Broz's headquarters, thus placing the Soviet Union on the same basis there as the United States and Great Britain. The Partisan regime on December 9 also announced its decision to ask lend-lease aid in carrying on its fight against the Axis and to seek representation on the Allied Advisory Commission for Mediterranean Affairs.

A further development of the Partisan governmental set-up came December 20 with Marshal Broz's announcement that "the Supreme Anti-Fascist Council of Yugoslavia has set up a National Committee of Liberation that now becomes the supreme legislative body of Yugoslavia, with all powers of the national government, through which the Anti-Fascist Council will discharge its executive functions." He added that his provisional government repudiated King Peter and would henceforth assert its claim to be the sole government of Yugoslavia.

In a manifesto issued December 22, the Broz regime ordered the Government-in-Exile deprived of all rights and "forbade" King Peter to return to Yugoslavia until after its liberation. Broz also demanded the trial of Mikhailovitch, whom he accused of conspiring with Axis forces to destroy the Partisans. It was noted that toward the end of 1943 Broz stressed the important role of the Communists in organizing the Partisan movement whereas the Communist participation had previously been played down. Although the Partisans received their major aid from the British and Americans, they placed major stress upon their close ties with the Soviet Union.

Mikhailovitch Policies. Throughout this period while the Partisans were consolidating their position, General Mikhailovitch and his supporters dismissed Broz and his followers as Communist "impostors." Mikhailovitch supporters asserted the Partisans claimed credit for many of the achievements of the Chetnik forces. They charged that Broz established his Jajce government to present the Yugoslav people with a fait accompli and prevent them from determining their future form of government by democratic methods after the war.

It was admitted by Mikhailovitch and the Yugoslav Government-in-Exile that the Chetniks had not engaged in all-out open warfare with the Axis forces during 1942 and the first half of 1943. Mikhailovitch repeatedly announced that he was prepared to mobilize over 200,000 well-trained troops whenever the Allies landed. But he insisted that to launch a major offensive before an Allied landing would be suicidal for his outnumbered forces and provoke the useless slaughter of many more thousands of Serb hostages. He repeatedly denied Partisan charges that he and his supporters had collaborated with Axis forces against the guerrillas under Broz.

In response to growing criticism of Mikhailovitch's relative inaction, King Peter in September wrote him a personal letter urging him to institute more active operations against the Germans and ordering the Chetnik forces to avoid conflict with the Partisans except in case of a Partisan attack. This order was apparently obeyed. In mid-October Chetnik offensives were reported to have considerably enlarged the territories under the control of Mikhailovitch. However the extent of the Chetnik territories and the number of Mikhailovitch troops actually under arms remained uncertain.

Mikhailovitch met the challenge implied in the establishment of the Partisan Government by issuing early in December an order for all guerrilla forces in Yugoslavia to submit themselves to his authority. On December 15 he charged that Marshal Broz's activities "aimed at establishing a dictatorship of a minority" and had led to the "terrible annihilation of the Yugoslav population."

Allies Support Broz. During the first half of 1943 the British continued to lend their sole support to Mikhailovitch and the Yugoslav Government-

in-Exile while Russian diplomatic support went entirely to the Partisans. This divergence of policy between two of the great Allied powers threatened to impair the solidarity of the United Nations. However the sending of a British military mission to the Partisan headquarters in May was followed during the latter half of the year by a gradual shift of British policy toward greater support of the Broz movement.

At first the British sent aid equally to both the Chetniks and Partisans, but on December 8 a British Government spokesman admitted that more British aid was going to the Partisans than to their rivals "for the simple reason that the resistance of the Partisan forces to the Germans is very much greater." This significant development followed a radio broadcast by Gen. Sir Henry Maitland Wilson, Allied Commander in Chief in the Middle East, warning all Yugoslav Chetniks collaborating with the Germans that they would henceforth be regarded as traitors unless they immediately deserted the Nazi cause. The Yugoslav Government-in-Exile on November 11 disavowed some Chetniks fighting with the Germans against the Partisans who called themselves "soldiers of King Peter." As for the U.S. Government, Secretary Hull announced on December 9 that it would continue to aid both the Partisans and the Mikhailovitch forces, leaving the matter of Yugoslavia's future government to the choice of the Yugoslav people.

The Government-in-Exile. The trend of Anglo-American policy toward greater support of the Partisans aroused bitter criticism among supporters of Mikhailovitch and the monarchy, who had defied German might in 1941 at such great cost to the kingdom. Nevertheless a major share of the responsibility for this state of affairs rested upon the Yugoslav Government-in-Exile, which proved unable to unite upon a political program that would rally the entire country behind the King and his Ministers.

At the bottom of this factionalism was the resistance of Croat and Slovene members of the regime to the restoration of Serb predominance, against which the other Yugoslav peoples had rebelled throughout the prewar years. The Croat and Slovene members demanded a formal pledge that upon its return to Yugoslavia the Government would proceed to put into effect the program for a federal, democratic constitution, assuring social and political equality for all Yugoslav minority peoples, agreed to before the German attack of 1941. Serb nationalist members were unwilling to give such a pledge.

As described in the 1943 YEAR BOOK, the appointment of a Serb nationalist as Ambassador to Washington had led to the resignation of the entire Cabinet on Dec. 29, 1942. Premier Slobodan Yovanovitch formed a new and smaller Government on Jan. 2, 1943, taking over personally the duties of Foreign Minister relinquished by Dr. Momcilo Nincitch. In this and all subsequent reorganizations of the Government during the year Mikhailovitch retained his post as Minister of War.

With British aid, the reformed Yovanovitch Government undertook negotiations with Moscow to attempt to end the Partisan-Chetnik friction in Yugoslavia. However King Peter and the Government supported their War Minister's policy of conserving his forces until Allied troops landed in the Balkans. On March 27, anniversary of the 1941 coup that overthrew Prince Paul's pro-Axis regime, King Peter broadcast a warning to his

people against premature revolt against the Axis. He also urged his subjects to rally around Mikhailovitch.

The Yovanovitch Government was forced to resign on June 17 and after a week-long crisis a new Ministry was formed June 26 with Milos Trifunovitch, deputy leader of the Serb Radical party, as Premier and Minister of Interior. The new Premier accepted the responsibility of introducing a federal, democratic constitution after the war, but within 36 hours of the Cabinet's formation one of the non-Serb Ministers resigned on the ground that he had no confidence that this guarantee would be observed.

Another cause of Cabinet dissension arose from the young King Peter's desire to wed Princess Alexandra of Greece immediately. They had been engaged unofficially for more than a year. Some members of the Cabinet held the King should not marry until the enemy was driven from Yugoslav soil, while others favored the wedding. The permission which the King had asked for in May was finally forthcoming on July 31 when Premier Trifunovitch officially announced the engagement. However opposition to an immediate wedding induced the King to postpone it.

Pouritch Cabinet Formed. On June 28 Peter broadcast a pledge that after the liberation of Yugoslavia he would make it possible for the Yugoslav people "to decide on their own fate in conformity with the principles of democracy." However the Serb and Croat members of the Government proved unable to agree upon the text of a statement outlining the regime's postwar policy. Talk of moving the Government to Cairo brought this issue to a head once more. On August 10 the Trifunovitch Government resigned and a new Ministry was formed immediately under Dr. Bozidar Pouritch, a well-known Serb diplomat. Composed of former diplomats and lesser officials, it was designed to allay the Serb-Croat friction.

The Government-in-Exile and King Peter moved their headquarters from London to Cairo at the end of September. In several statements issued immediately thereafter Peter indicated for the first time that his Government was making no distinction between Partisans and Chetniks and was striving to bring them into active cooperation. In broadcasts to his kingdom, the King called upon the guerrilla factions to refrain from internal struggles and unite against the Axis. On October 16 the Cabinet was broadened by the inclusion of two Croat and one Slovene members. Two of the new members had recently escaped from Yugoslavia after fighting in the resistance cause. The King also drafted the former ban (governor) of Croatia, who opposed the policies of the Serb nationalists dominating the Government-in-Exile, to serve as Yugoslav representative on the Allied Advisory Council for Italy.

Peter's efforts to reconcile the hostile factions in Yugoslavia and among his own supporters received a sharp setback as a result of the establishment of Broz's rival Partisan regime at the end of November. In an official statement issued December 5, the information office of the Government-in-Exile charged "Allied institutions" with stimulating the Partisan movement, which the statement denounced as one "of terroristic violence." This sharp statement provoked further discord within the ranks of the King's supporters and between the Allies and the Government-in-Exile. One of the new Croat Ministers resigned on December 8 after demanding enlargement of the Cabinet. At the same time a delegation from Slo-

vene units of the Free Yugoslav Army forming under the Government's auspices in the Middle East announced their refusal to fight under Mikhailovitch, although they said they would be happy to fight for the King. The resignation of Gen. Peter Zivkovitch, Commander in Chief of Yugoslav forces in the Middle East, followed on December 24.

The year ended with the Government-in-Exile holding firmly to its course. In a statement issued December 23 it denounced the Partisan political maneuvers as the work of imposters and affirmed the determination of the forces under Mikhailovitch to fight at the side of the Allies until the end of the war.

Claims on Italy. Despite its factional difficulties, the Government-in-Exile demanded representation in the Allied peace negotiations with Italy. It also put forward claims for the following Italian territories: (1) the entire peninsula of Istria, (2) the Cherso and Lussin islands in the northern Adriatic, (3) the port of Fiume, which Italy seized in 1924, (4) a strip of territory adjoining the prewar Yugoslav boundary and including the region from Trieste northward to Gorizia and Tarvis, and (5) the port of Zara on the Adriatic coast, annexed by Italy along with the Cherso and Lussin islands in 1920. Like the Greek and Ethiopian governments, the Yugoslav Government-in-Exile accepted with extreme reluctance the decision of the chief Allied powers to accept the Badoglio Government as a co-belligerent.

German Rule in Yugoslavia. In the German-occupied regions of Yugoslavia and in that part of Serbia controlled by the Germans through the Serb puppet government of Gen. Milan Neditch the plight of the population was reported worse than in any of the other German-occupied countries of Europe except possibly Poland and the occupied districts of Russia. The country was systematically looted of foodstuffs, minerals and other war supplies. Every act of active or passive resistance was punished by wholesale execution of hostages.

On January 29 General Bader, commander of the German occupying forces, threatened mass reprisals against the people of four Serbian districts if any general outbreak occurred in Yugoslavia. He carried out his threat to shoot 100 Serbs for every act of sabotage. There were continuous arrests and summary executions of persons suspected of aiding or sympathizing with any of the anti-German guerrilla forces. The ferocity of the German repressive measures led General Mikhailovitch on February 6 to appeal to the Allies to "stop the flow of blood and the mass murder of Serbs." He declared that nearly a million Serbs had been slaughtered by the Germans and their collaborators.

The Government-in-Exile reported March 12 that 1,250 Serb hostages had been slain in two recent massacres in Belgrade alone. Similar mass killings were reported from other towns and cities. Conscription of every able-bodied person in the kingdom for labor service was announced late in March in connection with the German mobilization program for Axis Europe. An estimate of the Yugoslav population losses made by two Yugoslav officers who escaped to Cairo in July ran as follows: One million dead in Croatia, most of them victims of the Croat Ustachi and other agencies of the Pavelitch regime; 100,000 killed in the Hungarian-occupied areas; 40,000 lost in the short war against the Axis invaders; an additional 10,000 civilians killed in the German bombing of

Belgrade; at least 150,000 executed by the Germans. There were also an estimated 20,000 Yugoslavs in concentration camps and 200,000 in prisoner of war camps. In attempting to stamp out the spreading guerrilla activities toward the end of 1943, the Germans resorted to even harsher repressive measures.

The people of Slovenia and other Italian-occupied areas suffered almost to the same degree before the Italians dropped out of the conflict. German occupation authorities in Montenegro in December reported that 20,000 houses, or about half of all private and state-owned property, had been destroyed and some 40,000 persons killed since the occupation began.

Situation in Croatia. Croatia continued in a state of open rebellion after more than two years of strong-arm rule by Pavelitch and his Axis allies. There the fierce racial war continued between Serbs and Croats except within the regions under Partisan control. German occupation of that part of the puppet Croatian state south of the River Save was announced late in February due to increased guerrilla activity.

In addition to the resistance movement, Pavelitch continued to experience difficulty with members of his pro-Axis and anti-Serb regime. He ousted his Foreign Minister, Mladen Lorkovitch, in April shortly before visiting Hitler's headquarters for further instructions. A purge of numerous other leaders of the Croat Fascist party was reported from London on May 10. On September 10 Pavelitch was said to have formally ousted the Duke of Spoleto, nephew of King Victor Emmanuel of Italy, from the Croatian "throne" bestowed upon the Duke by Mussolini in 1941 and which he never deigned to fill. Croat guerrillas reportedly convened an anti-Pavelitch assembly at Otocac on June 13 and elected the poet, Vladimir Nazor, as their president.

The Yugoslav information office of the Government-in-Exile at Cairo on November 26 announced without confirmation that General Mikhailovitch had reached an agreement for cooperation with the Croat Peasant party leader, Vladimir Matchek. Matchek, whose organization was said to be still a potentially strong political and moral force in Croatia, was allegedly confined to his residence but able to maintain contact with his followers.

See BULGARIA, GREAT BRITAIN, GREECE, HUNGARY, and ITALY, under *History*; WORLD WAR under *The Balkans*.

YUKON. A territory in northwestern Canada. Area, 207,076 square miles, including 1,730 square miles of fresh water. Population (1941 census), 4,914 (3,153 male; 1,761 female), comprising, by racial origin, British Isles races 1,966, Indian and Eskimo 1,508, Scandinavian 374, French 306, German 131, etc. Chief towns: Dawson (capital) 1,043 inhabitants in 1941, Whitehorse 754.

Production. Mining is the chief industry, the output for 1942 being valued at \$3,301,414 (gold, 79,058 fine oz., accounted for \$3,043,733 and silver, 506,002 fine oz., for \$210,143). Tungsten, lead, copper, and coal are mined. The principal forest trees are the balsam, spruce (white and black), poplar, cottonwood, and birch. Fur output (1941-42): 66,700 pelts valued at \$398,132. The Alaska Highway (British Columbia to Alaska) passes through the southern part of the territory. A new road from Haines, Alaska, to a point on the Alaska Highway 100 miles to the west of Whitehorse was under construction in 1943. There

are 58 miles of railway, and several landing fields for aircraft. The Yukon River (1,437 miles long) is an important means of communication from the coast to the interior.

Finance. For the fiscal year ended Mar. 31, 1943, revenue and expenditure amounted to \$1,106,189 and \$3,793,774, respectively.

Government. The Yukon is governed by a controller and a territorial council of three elected members. In the House of Commons of the Dominion Parliament at Ottawa the territory is represented by one elected member. Controller, G. A. Jeckell (app. June 30, 1932).

History. Terms were made public on Nov. 19, 1943, of the United States-Canada agreement (letters of June 27 and 29 and Aug. 14, 1943) known as the "Canol" project which called for the delivery of 3,000 barrels of oil daily from the wells near Norman, Northwest Territories, to the armed forces of the United States in Alaska, and for the disposal of the properties after the war. The plans specified the drilling of new wells in the Norman field and the storage of all gasoline produced by the refinery there during 1942; the construction of a pipeline, 550 to 650 miles in length from the Norman wells to Whitehorse, Yukon, to be completed in January, 1944; the construction of a refinery in Whitehorse, to be completed by May, 1944; and the construction of a pipeline, 100 miles in length (in operation during 1943), from Whitehorse to Skagway, Alaska, with storage and landing facilities at Prince Rupert, British Columbia. Late in November, 1943, the U.S. Under Secretary of War, Mr. Patterson, revealed that the yield of oil from the Norman field had already passed the estimate and an output of 20,000 barrels a day was assured from the already uncovered pool estimated at 50 to 100 million barrels. See ALASKA and CANADA under *History*.

ZANZIBAR. A British protectorate in East Africa, comprising the islands of Zanzibar (640 sq. mi.) and Pemba (380 sq. mi.). Total area, 1,020 square miles. Population (1931 census), 235,428 (Zanzibar, 137,741; Pemba, 97,687). Capital, Zanzibar, 45,276 inhabitants. Cloves, copra, sesame oil, and tobacco are the main products. Trade (1941): imports £1,041,000 (cotton textiles £159,000, rice £150,000); exports £1,551,000 (cloves £1,063,000, copra £80,000, clove and stem oil £91,000). Shipping dealt with in 1941 (ocean-going and coastwise): 218 vessels aggregating 572,820 tons net. Roads (1941): 243 miles.

Government. Budget estimates (1943): revenue £443,391; expenditure £483,213. In 1942 actual revenue and expenditure amounted to £549,103 and £483,765, respectively. The nominal ruler is the Sultan. A British Resident administers the government. There is an executive council over which the Sultan presides, and a legislative council of 15 members including the British Resident as president. Sultan, Seyyid Sir Khalifa bin Harub (succeeded Dec. 9, 1911); British Resident, Sir Henry C. Pilling (app. Dec. 23, 1940).

ZENITH CAMERA. See *PHOTOGRAPHY*.

ZERO, SUPER ZERO. See *AERONAUTICS* under *Axis Types*.

ZINC. Zinc, which during 1942 and the early part of 1943 was classed by the War Production Board as one of the most critical metals, by the end of the latter year had become sufficiently abundant to meet all war and essential civilian requirements.

Early in 1943, the WPB, acting through the

Metals Reserve Co., provided an incentive to mine operators to open up marginal high-cost ore deposits by expanding the Premium Price Plan. In February, 1942, this plan had provided bonus payment of 2¼ cents per lb. over the OPA industrial ceiling of 8.25 cents per lb. for zinc production by each mine above a quota based on 1941 production. For 1943, it was announced that as much as 8.25 cents per lb. would be paid for above-quota production provided this amount was necessary to meet high production cost. Thus, as much as 16½ cents per lb.—double the market price—was paid for some domestic zinc production by means of government subsidy although the output of most mines was paid for at a far smaller figure. Because the zinc supply had become more abundant it was announced Oct. 27, 1943, that the additional premiums set up earlier in the year would be denied to mines not already operating and to those "having a low labor productivity and located in areas in which there is a serious labor shortage." As a result of the bonus offers, however, many old mines were resuscitated and many new ones developed during the year.

Mine production of recoverable zinc in the United States was 740,587 short tons in 1943, a decrease of 27,438 tons from the output recorded in 1942.

More than a quarter of domestic mine production was contributed by the Tri-State region (Oklahoma, Kansas, southwestern Missouri), although ore reserves in that area were fast dwindling. The Coeur d'Alene district of Idaho, which had been counted on to replace the faltering Tri-State mines, was hard hit by labor shortage. About a quarter of domestic production came from New Jersey, New York, Tennessee, and Virginia, and a corresponding amount was mined in Montana, Washington, New Mexico, Colorado, Arizona, Utah, and Nevada. Wisconsin and Illinois also contributed. A slag fuming plant at Kellogg, Idaho, helped overall production, and fuming plants at Tooele, Utah, and East Helena, Mont., also were sizable producers. Vessels returning from South Pacific war zones in need of ballast made it possible steadily to continue imports from Australia, and Mexico, Peru, Argentina, and Canada all shipped ore to the United States for smelting.

For the second successive year smelters had difficulty in handling concentrates as fast as they were received, and by November stockpiles of two smelters in Texas and one in New Jersey had grown so unwieldy as to make it necessary for the Metals Reserve Co. to purchase a half interest in the piles.

More than 50 per cent of zinc consumption was for the production of brass and bronze and requirements for these alloys were the controlling factors in zinc demand. Galvanizing, the leading peace time use for zinc, and die-casting were other important consumers.

Slab zinc production in 1943 was 989,700 tons, compared to 945,067 tons in 1942. Slab zinc stocks at reduction plants were 170,700 tons at the end of 1943. This figure includes production from all sources—domestic and foreign ores and redistilled secondary from scrap.

See *LEAD*; *NEWSPAPERS*.

CHARLES T. POST.

ZIONISM. See *ARABIA*, *EGYPT*, and *PALESTINE* under *History*; *JEWISH ORGANIZATIONS* listed under *Societies*.

ZONING LAWS. See *FLOOD CONTROL*.

ZOOT-SUIT RIOTS. See *MEXICO* under *History*.

GLOSSARY

OF IMPORTANT NEW WORDS AND WORDS IN THE NEWS

(Compiled and prepared by HAROLD WARD, with the assistance of many Contributing Editors).

- actinomycin.** A new and very deadly rodent killer substance extracted from a soil bacterium known as *Actinomyces*.
- aerobiology.** The study and investigation of the ways in which minute forms of life—as bacteria, pollen, and viruses—are transported by or through the air, with particular reference to the problems of disease, health, and hygiene.
- Aerocomet.** Name officially adopted by British and American authorities for the new jet propulsion airplane.
- aeropolitics.** The politics of air power; the analysis and formulation of national policies, domestic and foreign, in terms of the control of airways, the development of aeronautics, and the operation of air transport systems both in peace and war.
- aerosol bomb.** A device filled with insecticides released and atomized under high pressure. See INSECT PESTS AND PLANT QUARANTINES.
- Alpa Reflex.** A new miniature precision camera using 35-millimeter film, having a coupled range finder and the feature of reflex viewing. Probably a Swiss patent. See PHOTOGRAPHY.
- amplidyne.** An electromagnetic device consisting of a short circuit with a coil of the compensating field winding type. It is used for the control of powerful electric machinery, artillery, airplane guns, etc.
- anglohelvetium.** Proposed name for the radio-active element of atomic number 85, whose discovery under the name alabamine was reported in 1931. First prepared from radium in 1940 by Dr. Walter Minder and Mrs. Alice Leigh-Smith, of the Radium Institute of Bern. The new element, then called helvetium, was renamed in 1943, after development of a new method for isolating it.
- area target.** A bombing target, usually for night-flying military planes with heavy bomb loads, selected for the general demolition or effective disruption of a relatively large area. Compare *precision target*.
- arwrology** (ar-roor-ology). The science and art of all-out hand-to-hand fighting. A recent development of kudo, jiu-jitsu, and similar techniques of self-defense, it combines a highly specialized knowledge of anatomy and neuro-muscular reflexes with speed, accuracy, and resourcefulness in the use of physical methods. [Derived from Welsh *arwr*, hero]
- assault service mask.** A new type of gas mask for use in battle. Developed as a protection against all known war gases, its air-purifying canister fits snugly to the left cheek of the facepiece. Weighs less than three pounds, and will float in water.
- A.T.C.** Air Transport Command, the U.S. Army organization which supervises and controls all air transport of persons and goods to any part of the world.
- audio scale.** An instrument, operating on the airplane radio beam principle; by emitting audible signals within the required limits it enables blind people accurately to weigh small articles. Developed by Laurence Williams, engineer of the Toledo Scale Co.
- autoejector.** An apparatus, chiefly an artificial heart and an artificial lung, used by the Soviet physiologist, Dr. Serge Bryukhonenko, in the resuscitation of dead dogs.
- B₂H₂ Measure.** The Senate Ball-Burton-Hatch-Hill measure proposing a postwar international organization. See UNITED STATES under *Postwar Policy Issues*.
- ball turret.** A retractable armored gun turret of roughly spherical shape which can quickly be lowered to fighting position under the belly of a bombing plane.
- Bancor.** Proposed name for an international monetary unit for use in the postwar period; sponsored in the Keynes Plan. Compare UNITAS.
- battle-carrier.** A new giant aircraft carrier of 45,000 tons, designed to carry twin-engined bomber planes.
- bazooka.** The U.S. Army Rocket Launcher A.T. Model 1, so-called from resemblance to grotesque musical instrument exploited by radio comedian Bob Burns. See MILITARY PROGRESS.
- bangalore.** A device for the clearing of land mine fields by sympathetic detonation. It consists of a length, usually 20 feet, of cast iron pipe filled with TNT which, when detonated, causes the explosion of all or most mines in the immediate neighborhood. Perhaps named for *Bangalore*, a town in India, where a similar device is said to have been used.
- BBC.** New official symbol for the chemical warfare tear gas brombenzyl cyanide, replacing CA.
- biscuit gun.** A tube-like, hand-operated lamp which concentrates variously colored signal flashes upon only those, as airplane pilots about to land, at whom the beams are aimed.
- black-sand.** Marine deposits in Coos County, Oregon, containing chromium concentrates.
- Black Widow.** The P-61 night fighter plane. See AERONAUTICS (page 8).
- blister.** A convex window protected by transparent material in the fuselage of an airplane that permits vision in all directions.
- blue goose.** An incendiary, .50-caliber machine gun bullet for use against enemy airplanes. Developed for the U.S. Army Ordnance Department, it can penetrate thick armor plate, releasing on impact a secret chemical which generates flames of blast furnace temperature, exploding self-sealing gasoline tanks. So-called from the sky-blue tip which identifies it.
- boil.** Air Corps term for the small and often cramped enclosure housing an airplane gun and its gunner.
- Bouncing Betty.** A German booby trap in the form of a cylinder about 5 inches high and 4 inches across. Moderate pressure on any of the three detonator tubes drives the cylinder into the air, explodes the charge and disperses shrapnel in all directions. Also called the *silent soldier*.
- Big Inch.** The 24-inch oil pipeline running from

- Longview, Texas, to Phoenixville, Penn., a distance of 1,251 miles. Begun Aug. 3, 1942, and completed July 19, 1943, at a cost of about \$100,000,000, this pipeline, served by 26 pumping stations along the route, will deliver a capacity load of 300,000 barrels of oil a day, equivalent to the capacity of 25,000 railroad tank cars.
- Big Inch, Jr.** Another oil pipeline, begun in the spring of 1943 and extending from the Houston-Beaumont oil area on the gulf coast to Linden, N.J. Estimated cost, \$75,000,000; rated capacity of the 20-inch pipe, 235,000 barrels of gasoline a day.
- Breda gun.** An Italian machine gun, firing 6.55 and 7.35 mm. cartridges at an effective rate of 120 per minute (theoretical rate, 500 per minute). Air-cooled, 40 inches long, weight 23½ lbs. with mount.
- bullis fever.** An incapacitating malady of undetermined origin first reported among U.S. troops at Camp Bullis, near Fort Sam Houston, Texas. Believed to be associated with the bite of the Lone Star tick, the fever runs to severe headaches, low white blood cell count, loss of weight, and temperatures as high as 105.
- CAP.** The Civil Air Patrol, serving the U.S. home front, watching for and reporting submarines, delivering mail and emergency shipments, engaging in rescue work, etc.: a civilian organization operated chiefly by private plane owners.
- cargoliner.** A large, strongly built airplane designed to carry freight.
- carryback.** An authorization to a taxpayer to recompute past taxes by carrying back specified deductions; first included in U.S. Revenue Act of 1942.
- cat cracker.** A highly efficient method of cracking crude petroleum by the use of catalysts, substances which speed up difficult chemical reactions; used to increase production of high-octane gasoline.
- celestial navigation trainer (C.N.T.).** An elaborate ground apparatus for instructing a full airplane crew in the theory and practice of blind flying. Resembling the framework of a silo, it is equipped to reproduce all the illusions of flight in a stunted airplane body, including the appearance of the sky and the ground under all conditions, the effects of winds, clouds, and storms, etc. Developed by Edwin A. Link, Jr., inventor of the Link Trainer.
- celluloid gipsy.** An itinerant exhibitor of motion pictures, serving rural districts and small towns in the American hinterland.
- chapstick.** A cylindrical stick of camphor and other protective chemicals; issued to American soldiers as a safeguard against chapped skin and sunburn.
- CL.** Official symbol for the chemical warfare agent, cyanogen chloride.
- clavacin.** A substance with medical possibilities resembling, but perhaps greater than, those associated with penicillin. It comes from a mold fungus, *Aspergillus clavatus*, which grows on stable manure, and is particularly active against certain bacteria. Also called *clavatin* by British workers.
- claviformin.** A crystalline antibacterial substance isolated from the mold fungus *Penicillium claviforme* by British workers. Shown to be identical with clavatin (called *clavacin* by American discoverers).
- coach-sleeper.** A type of Pullman sleeping car in which the convertible berths are crosswise instead of lengthwise, and in three tiers instead of two.
- combat correspondent.** An accredited writer or journalist who accompanies troops in combat to report the action.
- compreg.** Resin-impregnated sheets of wood, stacked together and bonded by pressure, under varying temperatures, to attain special properties of strength, density, toughness, and finish. Used in making airplane propellers, radio antennae masts, table tops, etc. See also *impreg.*
- crash wagon.** A motor truck operated as an emergency field unit for attending to crash landings from aircraft, fully equipped with first-aid and surgical supplies, radio and fire apparatus, all in charge of qualified personnel. Also *crash truck*.
- critical components.** Parts essential to the operation of vital war machines but which are hard to get, and thus delay completion of the machines.
- crocodile soldier.** A member of the Amphibious Command of the U.S. armed forces, trained and equipped for landing operations.
- croton.** A brown dye made from rock lichens; developed by Irish chemists.
- crypto-fascist.** A person whose fascist sympathies are concealed, but expressed chiefly through covert opposition to all anti-fascist beliefs and actions; especially, a clerical fascist.
- Curzon Line.** The eastern boundary of Poland as proposed by George Nathaniel, Viscount Curzon, and accepted by the Supreme Council of the Allies, Dec. 8, 1919. It runs from Grodno in the north nearly due south to include Brest-Litovsk, thence down to Sakal and Pyzemysl, to the Carpathians.
- cycle-welding.** A process of joining sheet metal, either to metal or to rubber, wood, or plastics, by the use of a special cement, hydraulic clamps, and controlled methods of heating to the required temperatures. Developed by the Chrysler and Goodyear companies as an improvement over riveting or other welding methods. Also called *cyoweld* and *cycle-weld adhesive process*.
- cutback.** A sharp cut in the production of raw materials or manufactured goods, as for the armed services, due to a sudden or unforeseen lessening of demand. See *BUSINESS REVIEW*. A **cutback strike** is a protest against reduction in the labor force caused by a cutback. See *LABOR CONDITIONS*.
- cytochemistry.** The science which treats of the physical and chemical organization of the living cell, and especially of the cytoplasm in distinction from the nucleus.
- DDT.** (From initials of the chemical name, dichlorodiphenyl-trichloroethane). An insecticide one of whose constituents is chloral hydrate (knockout drops). Introduced from Switzerland in 1942, it has been found effective against many insects by contact only and with no apparent damage either to man or to the plants and animals protected by it.
- DE (destroyer escort).** A U.S. Navy auxiliary vessel of about 1,300 tons, primarily designed and built to protect convoys from enemy submarines. See *NAVAL PROGRESS*.
- deck ankles.** Term applied by British naval surgeons to stiff, swollen, and aching ankles caused by wearing gymnasium or other improper shoes on shipboard.
- Demerol.** A synthetic morphine substitute for the relief of pain, made by the Winthrop Chemical Co. Tests have shown it to be safer and less toxic than morphine, with lessened risk of addiction.

- Diamaca.** A comet first observed in Rumania in the early morning of Sept. 10, 1943, and independently on September 18 by the American amateur astronomer, Leslie C. Peltier. Named after its discoverer.
- Diasone.** A synthetic drug developed by the Abbott Laboratories, and deemed to be efficacious in the treatment and cure of tuberculosis.
- doorkey children.** Children whose parents or guardians are absent from home all day, especially on war jobs, and who, though having their own keys, wander about the streets: also called *defense work orphans*.
- dry run.** Gunnery practice without live ammunition or shells.
- Dulag.** Abbreviation for *Durchgangslager* (transient camp), any German camp for prisoners of war in transit.
- Dulagluft.** Abbreviation for *Durchgangsluftwaffelager* (transient air-force camp), any German prison camp for enemy airmen in transit.
- ellipsin.** A complex protein of unknown structure and function isolated from the liver of guinea pigs; so named by the American anatomist, Dr. R. R. Bensley.
- Escape Period.** A 15-day period provided for in the National War Labor Board's standard maintenance of membership clause, during which an employee may withdraw from a specified trade union if he does not desire union membership as a condition of employment during the life of the contract.
- ETOUSA.** European Theater of Operations, U.S. Army.
- extender.** A debasing ingredient to be mixed with a costly or highly prized food for the purpose of making a given quantity go further or last longer, as chick peas mixed with coffee. A war-time device brought in by food shortages and rationing.
- Fita Fita.** Native police officers in American Samoa who are enlisted men in the U.S. Marine Corps.
- flash freeze.** A method for ultra-rapid artificial freezing of foods, developed by engineers in the University of Texas. Tests have shown a freezing time of less than five minutes, as compared with previous records of 30 minutes, without formation of ice crystals and destruction of cells.
- flat top.** An aircraft carrier.
- Flexol DOP.** Trade name for a plasticizer material, used to soften plastics and give them flexibility. Chemical name, ethyl-hexyl-phthalate.
- flightray.** An electronic device for automatically keeping tab on a selected group of airplane instruments, providing the pilot with accurate coordinated flight information on such factors as direction, horizon, air speed, altitude, etc.: a project of the Sperry Gyroscope Co.
- flight recorder.** An electronic instrument that records automatically all significant data on the performance of an airplane, especially during a test flight; capable of 144 separate readings in about 3 minutes: developed by the Brown Instrument Co.
- fluid coal.** Coal, pulverized to dustlike fineness in specially designed mills, mixed with air to develop fluid characteristics, and forced through pipes for combustion in forging furnaces and other suitably constructed heating units.
- Flux-Gate Compass.** Trade name for an electromagnetic device which permits accurate air navigation in regions and under conditions unsuitable for the standard compass. Consists essentially of three double-wound electromagnets kept level with the earth's surface by a gyroscope, and generating currents whose fluctuations, on crossing lines of force, yield data for instant and precise determination of the position and course of an aircraft: developed by the Bendix Aviation Co.
- folic acid.** A member of the vitamin B complex, introduced and named by Dr. Roger J. Williams of the University of Texas; probably associated with the production of white blood cells and therefore important in the treatment of anemia, especially as caused by sulfa drugs.
- Formula 612.** Provisional name for a powerful mosquito-repelling substance made entirely of synthetic materials by chemists of the New Jersey Agricultural Experiment Station. It was first used with effect by American forces in New Guinea and the Solomons. Chemical name, 2-ethyl-hexanediol-1, 3.
- fumigacin.** A substance obtained from a soil fungus known as *Aspergillus fumigatus*; effective against certain bacteria and of possible medical value.
- fuze.** Correct U.S. Army Ordnance spelling for the mechanical device that actually detonates the explosive charge in shells, bombs, mines, grenades, and the like. *Fuse*, by contrast, is a device, such as a powder train, for carrying fire to the explosive.
- genonomy.** The scientific investigation of the blood and family relationships among individuals of the same species, especially with regard to variations, hybrids, and other factors of importance in systematic biology. Term proposed as an alternative to *biosystematics* by Prof. Carl Ebling of the University of California.
- geotechnology.** The technology of all the mineral arts and sciences, from metallurgy to ceramics, with emphasis upon the improvement of old and the development of new methods, techniques, processes, and products.
- "Geronimo!"** The traditional cry of an American parachutist as he is about to jump from the plane. Attributed to Sergeant Charles Eberhard, one of the original members of the U.S. Army test parachute platoon formed shortly after invasion of Holland by the Nazis. Suggested by film of that name and first used by Eberhard in the sense of "On my way and all well!"
- Gibson girl.** A small portable radio transmitter for the use of airmen who are forced down at sea. It has an aerial and is equipped for sending an S.O.S. automatically in Morse Code: so named from its hour-glass shape.
- goumier.** A member of one of the Algerian *goums*; a contingent of native Moroccan troops attached to and under the command of the French Army in North Africa.
- gray ghost.** U.S. Air Corps name for the training plane in which the group commander gives a final check flight to candidates for full service. Rejections are as high as 96 per cent, hence the alternative name of "washing machine" for this plane.
- greenbelt.** A belt of rural land, which may be forested or developed as a park, surrounding a planned town and permanently safeguarded against undesirable incroachments. Hence, a **greenbelt town**, one providing shelter, services, stores, schools and other community facilities, especially one of three towns so laid out to demonstrate this type of community planning.
- GR-S.** New symbol for Buna S type of synthetic rubber.

Guadalcanal neurosis. An extreme form of nervous and mental shock as observed in the group of U.S. Marines who survived the costly Guadalcanal campaign. All the sufferers exhibited the symptoms of an intense, searing anxiety accompanied by a morbid fear of being thought cowards.

Guerin process. A method of using heavy rubber sheets or blankets to force sheet metal into contact with metal forms, thus reducing the cost of dies. Extensively used in the fabrication of airplane parts. Developed in 1940 by Henry E. Guerin, of the Douglas Aircraft Co.

Gung Ho! Slogan of the Chinese Industrial Cooperatives, meaning "Work Together." Used also by American raiders operating in the Pacific area under Lieut. Col. Evans Carlson.

handie-talkie. A compact, five-pound portable radio apparatus designed to carry in the hand and equipped for sending and receiving. See MILITARY PROGRESS.

heatronic molding. A method for subjecting certain types of plastics to high frequency radio waves in order to impart the uniform temperature necessary for quick and accurate molding into the required shapes, especially large ones like instrument panels, machine housings, and automobile bodies.

helicab. Proposed name for a small passenger airplane equipped with a helicopter and designed as a flying taxicab.

Hellcat. The Grumman F6F Navy fighter plane. See AERONAUTICS (page 7).

Higgins boat. A small motorized naval transport. See NAVAL PROGRESS.

HL. Official symbol for a mustard gas-lewisite chemical warfare mixture.

HN. Official symbol for the chemical warfare agent, nitrogen mustard.

Hold-the-Line Order. Executive Order No. 9328, issued by the President on April 8, 1943, revising the grounds on which wage increases might be approved, as a further step to "hold the line" against inflation.

Hooligan's Navy. Humorous sobriquet given to the group of private yachts which, with their owners, crews, and assorted volunteers, were offered for patrol duty off the Atlantic coast.

Hump, also Air Hump. That sector of the Air Transport Command's far eastern supply route which extends from Assam in India over the Himalayas to Yunnan in China. It crosses some of the most dangerous and unprotected terrain in the world, a distance of 500 miles with few or no landing fields.

hydrolant. Contraction of the phrase "hydrographic message of the Atlantic," meaning a radio message in Morse code flashed by agents of the U.S. Hydrographic Office, to warn of dangers at sea and to give due notice of important changes affecting marine service.

hydroxylin. A low-cost, general purpose lignin plastic with a cellulose filler, made from hardwood wastes treated with chemicals and available either as a fine molding powder or as laminating sheets, both of a glossy black color. Tough, lightweight, with high electrical resistance, this plastic is adapted for many uses, especially those formerly requiring rubber.

ilag. Abbreviation for *Interniertenlager*, a German internment camp for civilians.

impreg. Thin layers of wood, impregnated with a water solution of resin-forming chemicals, then

dried, cured, and bonded with resin glues. The resultant plywood is highly resistant to moisture, fire, decay, and weathering. See *compreg*.

immunogenetics. The study of the phenomena of immunity to disease as conditioned by and associated with the transmission of specific genetic factors.

Incentive Plan. A plan to improve production by giving workers extra pay for extra work and output. Approved by the National War Labor Board provided the wage adjustments do not appreciably increase production costs, serve as a basis to raise prices, or prevent a justifiable price decrease.

industrial fire brigade. A group of men specially trained and equipped to handle fires in industrial plants; a war-time development. See FIRE PROTECTION.

in-migrant. A person who has moved from one locality within the U.S. to another, primarily to engage in war work. A qualified in-migrant receives special consideration in respect to housing, so far as this is controlled by the National Housing Agency. The term *in-migration* is also used.

Interglossa. A proposed universal language, invented by the British scientist, Professor Lancelot Hogben. It is characterized by a relatively small vocabulary based chiefly on the Greek and Latin roots of scientific and technological terms, and by the absence of grammatical flexions.

internitis. Food poisoning, so called because of its frequency among those held in the civilian internment camp of Santo Tomas at Manila.

iron compass. Railroad tracks: a term used by American airplane pilots who find them an aid on cross-country flights.

isotel. A chemical compound which can replace another in the performance of a specified function or in the obtaining of a given effect. Proposed by Roger J. Williams on the analogy of *isomer* and with special reference to various members of vitamin complexes for which the term *vitamer* had already been suggested by Dr. Dean Bush and R. J. Wright, of the National Institute of Health.

jay-pee. A jet propelled airplane. See *jet propulsion*.

jeep disease. The formation of painful cysts and sinuses at the base of the spine, due largely to excessive vibration and irritation. So called from its occurrence in drivers of jeeps and other military vehicles, but long known as pilonidal disease.

jet propulsion. A method of operating airplanes without propellers, by utilizing the well known reaction principle of a powerful jet of air or fuel gases continuously expelled from the engine under high pressure. Technical details of construction, type of fuel, engine design, and performance not disclosed. Jet propulsion is *not* the same thing as rocket propulsion. [German type called *Heissluftstrahltriebwerke*—"hot-air ray-drive works"] See AERONAUTICS.

Kalibapi. The Japanese totalitarian political party in the Philippines.

L. Symbol for the chemical warfare agent, lewisite, replacing M-1.

LCI. Official Navy designation for landing craft-infantry, any large ship designed for the transport of troops to invasion points. See NAVAL PROGRESS.

Ledo Road. A road beginning in the Naga Hills district of Annam and running in an easterly

- direction along the southern slopes of the Himalayas, traversing some of the toughest jungle country in the world. It will eventually connect with the Burma Road.
- lescotite.** A high grade bauxite, rich deposits of which have been discovered on the southern peninsula of Haiti. It has a very low percentage of silica and is a source of aluminum. Named after Elie Lescot, President of the Republic of Haiti.
- LST (landing ship-tank).** An auxiliary vessel of the U.S. Navy having in the bow two huge doors which open outwards to permit rapid disembarkation at invasion points of tanks, tank destroyers, heavy guns, and a full complement of men. See **NAVAL PROGRESS**.
- Leigh light.** An intensely powerful searchlight first used on bombing planes of the British Coastal Command to permit the night spotting of enemy submarines when surfacing to recharge batteries, etc. Developed by Wing Commander H. De V. Leigh.
- Little Steel Formula.** A policy laid down by the National War Labor Board relative to the Little Steel cases (July 16, 1942). It concedes a rise in the cost of living of approximately 15 per cent above the January, 1941, level, and approves general wage increases up to 15 per cent of average straight line hourly earnings in January, 1941, for employees in a given bargaining unit who had not received increases up to that amount.
- Lufilager.** Abbreviation for *Luftwaffelager* (air-force camp), any German prison camp for enemy airmen.
- M.** New official symbol for the chemical warfare agent, mustard gas, replacing HS.
- machine-shop mist.** A fine vapor caused by the evaporation of the cooling oil applied to the edge of high-speed cutting tools. See **HEATING AND VENTILATING**.
- Marlag.** Abbreviation for *Marinelager* (marine camp), any German prison camp for enemy seamen.
- Marauder.** The Martin B-26 medium bomber. See **AERONAUTICS**.
- Marvinol.** Trade name for a vinyl-type plastic developed by chemists of the Glenn L. Martin Co. It is made from coal, salt, water, and air, and can be used for making inner tubes.
- MGB.** Motor gun boat: a British auxiliary naval vessel similar to the American PT boat.
- micro-analyzer.** An electronic device for the identification of extremely minute particles or portions of small objects, such as a virus or bacterium. It operates by measuring the specific losses in energy through the impact of a beam of electrons on the object, different losses indicating different types and amounts of materials. Designed and built as an outgrowth of the electron microscope by Dr. James Hillier, of the R.C.A. Laboratories.
- micro-inch.** A unit of length, equal to one-millionth of an inch; used principally to indicate the depth of scratches, etc. in finished surfaces of metal, glass, etc. Not the same as *micron*, which is one-millionth of a meter.
- micromeritics.** The science of fine particles; the study of the physicochemical properties and behavior of finely divided matter, with special reference to technical applications, as in soil physics, ceramics, atmospheric pollution, metallurgy, etc.
- Milag.** Abbreviation for *Militaerlager*, a German prison camp for enemy soldiers.
- milch cow.** A German submarine designed to carry fuel, torpedoes, and other supplies to combat craft at sea. See **NAVAL PROGRESS**.
- mission.** The specific task of an airplane and its crew, whether reconnaissance, observation, bombing, etc.: more comprehensive than *raid*. Compare *sortie*.
- musette.** A small traveling museum, especially one with exhibits of poisonous plants, harmful insects, or other material of value in the instruction of soldiers in army camps.
- Mycoban.** Trade name for a chemical which, added to bread dough, will protect the finished loaves against mold for several days, without impairing the taste.
- native.** For a legal definition of this term, as construed in 1943, see **LAW** under *War Decisions*.
- Nebelwerfer.** A German 6-barreled fog-thrower. See **BOMBS**.
- NE steels.** National Emergency steel alloys, developed to take the place of alloys requiring scarce or unobtainable materials.
- neurometer.** A tuning fork of special design used to test the degree of responsiveness to a standard vibration, as an indication of fatigue and other nervous conditions. Developed by Maj. Aaron Roth, U.S. Army, as a test for fatigue in airplane pilots.
- Nissen hut.** A portable structure U-shaped in cross section, consisting of T-ribs and corrugated iron sheets with an inside lining, and having a floor area ranging upward from 16 by 36 feet. Designed for the housing of troops and supplies in Iceland and other Atlantic bases; originally made by the Nissen Co. of Great Britain, now used by the U.S. armed forces. See also *Quonset hut*.
- Northover projector.** A small-caliber, breech-loading grenade-thrower developed by the British early in the war as an anti-tank weapon. A lightweight unit, with an effective range of about 200 yards, it can throw several types of grenade.
- Notatum.** Trade name of a selected strain of the penicillin mold, *Penicillium notatum*, developed by the Therapeutic Research Corporation.
- OC.** Official symbol for the chemical warfare agent, hydrogen cyanide.
- octofollin.** A sex hormone reported to give beneficial results to women past middle age who suffer from the diminishing supply of the natural hormone. Chemically synthesized by workers at the Schieffelin Laboratories.
- Oflag.** Abbreviation for *Offizierslager*, a permanent German camp for prisoners of war of officer rank.
- onchocerciasis.** A tropical disease caused by a parasitic nematode worm transmitted to man by the sting of the black gnat or buffalo gnat. It is endemic in Guatemala, where, in addition to the usual rheumatic symptoms, tumors, and skin disorders, it may result in blindness.
- Otto list.** The list of French authors whose writings are forbidden by the Nazis. See **FRENCH LITERATURE**.
- Oxford unit.** That amount of penicillin which, as compared with an arbitrary standard, completely inhibits the growth of a test strain of a specified micro-organism, usually *Staphylococcus aureus*.
- paleopedology.** The study of fossil soils; a term introduced by Prof. C. C. Nikiforoff, of the U.S. Department of Agriculture to denote the investigation and analysis of ancient soils, especially in relation to early and extinct forms of life.
- pancake.** A type of Diesel engine having its cylinders

- arranged one above the other, pancake-fashion, as in a recent type of submarine chaser.
- papreg.** Sheets of paper impregnated with resins and bonded under heat and pressure to give a plastic-like material of high tensile strength, stability, and resistance to moisture. It has been proposed as a substitute for aluminum in aircraft construction.
- paragraph troops.** Derivative sobriquet given to Army officers assigned to desk- and paper-work in Washington.
- pararraft.** A one-man collapsible rubber boat for use by airmen when downed over water. It is inflated from a supply of compressed air and carries paddles, sail, food, first-aid and repair kits, sea-marker chemicals, etc.
- pathfinder.** An airplane assigned to fly ahead of the main body of bombers, in order to illuminate the target by dropping special flares of variable color.
- patulin.** An antibacterial substance obtained by British workers from the mold fungus *Penicillium patulin*. It resembles clavacin in physical and chemical properties and is under investigation as a new drug.
- PD.** Official symbol for the chemical warfare agent, diphenyl chloride.
- penicillin B.** A substance extracted from the mold fungus which yields penicillin. First isolated by chemists at St. Louis University, and so powerful that it will affect bacteria in a dilution of one part to one billion.
- perspective map.** A pictorial map specially designed and projected for high altitude precision bombing by members of the USAAF. Printed in four colors and on a large scale, the central map shows all significant features of the terrain drawn on an oblique angle; surrounding it are perspective drawings of the encircled target area, each representing a different approach as seen both by the navigator and the bombardier at specified vertical and horizontal distances.
- phosphorescent microscope.** An optical microscope which utilizes the phosphorescence developed in certain substances and materials on exposure to ultraviolet light. Devised by Drs. E. N. Harvey and A. M. Chase of Princeton University.
- phthalonitrile.** An insecticide developed as a substitute for lead arsenate in the control of truck-crop and garden insects, as the tobacco flea beetle and the hornworm.
- pythoncide.** A highly volatile substance of unknown chemical composition, emitted by the freshly prepared paste of onions, garlic, and certain other plants. Discovered and so named by Dr. B. Tokin, of the experimental research laboratories of the Tomsk State University, R.S.F.S.R., it has been under investigation as a strong bactericidal substance in the treatment of infected wounds.
- piat.** A British antitank weapon, so called from the initials of its official name, Projector Infantry Anti-Tank. It consists essentially of a light-weight steel tube enclosing a coiled spring which on release thrusts a rod against the cartridge in the tail of a 2¾ lb. bomb, projecting it with a force sufficient to pierce 4 inches of armor at 100 yards. Weight of the projector, 33 lbs. First used by British and Canadian troops in Italy.
- pluvio-chronograph.** An instrument for automatically recording the exact hour when it rains or snows, consisting of a series of 24 smoked glass plates, set along the rim of a disc which exposes a fresh plate every hour. Developed at the Pennsylvania State College by Dr. H. H. Neuberger.
- pony edition.** Small sized edition of a regular magazine printed for and distributed by the U.S. Army Special Services Division, for members of the armed services overseas. Usual format, 6 x 9 inches.
- portal-to-portal pay.** Compensation for the time spent by a miner in underground travel to and from his working place.
- precision target.** A comparatively small but important bombing target, usually for day-flying military planes with medium bomb loads, selected for total demolition of a specific object, as a dry-dock, power plant, railway terminal, bridge, etc.
- pressure cabin.** The sealed cabin or cockpit of an airplane, into which atmospheric air is forced from compressors to eliminate the need for individual pressure suits or oxygen tanks at high altitude. Also the verb *pressurize* and the noun *pressurization*. See AERONAUTICS.
- Primacord.** Trade name for a detonating fuse consisting of a waterproof textile tube filled with pentaerythritol tetranitrate (PETN); because of its safety in handling and its high velocities it is used for detonating land mines and for other military purposes.
- psychodietetics.** The study of the many complex interrelationships between food, eating, and mental processes, with special reference to the health of individuals and groups. The sciences of nutrition and psychology considered as a unit.
- PT boat** (patrol torpedo boat). A small, compact, rugged, highly maneuverable vessel for engaging the enemy in patrol actions. It is equipped with two torpedo tubes and a supply of depth charges; powered by three 1,300 h.p. airplane motors, developing a speed of 40 knots or more. Similar boats in England are called motor torpedo boats (MTB).
- Quonsett hut.** An American modification of the Nissen hut, designed for use in the South Pacific as well as in Alaska, the Aleutians, and Atlantic bases of the Army and Navy. Used mostly for hospital and recreation purposes, it has a special masonite lining, insulation, plywood floor, electric lighting, and ventilation. Size: 20 by 56 feet.
- R.D.X.** (Research Department, formula X), a powerful high explosive used by the British and American armed forces. Perfected in England in the summer of 1936 by Commander P. A. M. Long, and a scientist, who with three others lost their lives in the final stages of the work.
- radionics.** Term proposed as an alternative to, or substitute for, *electronics*. It embraces the study of the properties of electromagnetic radiations and charged particles, with particular reference to practical applications, as in radio, radar, television, x-rays, vacuum tubes, and in all other fields which utilize the controlled activity of electrons and ions.
- Renshaw system.** A method for visual education developed by Dr. S. Renshaw. It consists in projecting images on a screen for a specified time, the intervals being progressively diminished until completion of the course. As used in aircraft or ship recognition, it is intended to enable the student to identify any type of craft in 1/75th of a second. See PHOTOGRAPHY.
- resuscitor.** A modified form of pulmotor recently introduced for the treatment of carbon monoxide poisoning or other forms of asphyxia. Has been strongly criticized on technical and physiological grounds by Prof. Yandell Henderson of Yale.

- SA.** Official symbol for the chemical warfare agent, arsine.
- sawdust dye.** Any of a group of water-soluble dyes made from waste sawdust heated with sulfur and caustic soda; said to rival coal-tar dyes in color and brilliance.
- screening.** In the psychiatric treatment of large groups of individuals, as army and navy inductees, the process of weeding out all those whose condition is such as positively indicates physical or mental breakdown, or failure to adjust themselves to the responsibilities of military or other exacting service. Also as a verb, *to screen*.
- Seabee** (from *C.B.*, abbreviation of *Construction Battalion*). A member of the Battalion organized in 1942 by the Bureau of Yards and Docks of the Navy for handling urgent and dangerous construction jobs, especially in battle areas. Present strength of the Seabees, over 200,000 officers and men.
- second-injury fund.** A State-authorized fund for meeting the additional cost to employers of the permanent disability of workers resulting from second injuries. Designed to encourage the employment of physically handicapped persons.
- service bank.** A bank specially organized and equipped to handle the money problems of American servicemen at home or overseas. Located wherever convenient—usually as a branch of a large banking house—the banks accept deposits, cash checks, make loans, and otherwise aid in the finances of soldiers, sailors, and marines.
- shipyard eye.** Popular name for kerato-conjunctivitis, a highly contagious disease of the eye noted among workers in shipyards and factories. The cause may be a virus which inflames the cornea and conjunctiva of the eye.
- sketchmaster.** An instrument operating on the camera lucida principle, used to produce a vertical image of a photograph on a map from which delineated detail can be traced directly. See **PHOTOGRAPHY**.
- smoke float.** A chemically activated, portable smoke-screen device which lays a dense cloud of smoke over the surface of water, and sinks without trace; used by the U.S. Navy.
- sortie.** A flight of an airplane on a military mission. See **MISSION**.
- spigot mortar.** A British mortar with a low trajectory, operating on the same principle as the German *Granatenwerfer* (grenade thrower). It fires a 20-lb. anti-tank shell or a 14-lb. anti-personnel bomb, without a pronounced flash and at an effective range of from 150 to 400 yards.
- split run.** Dividing a newspaper display ad into two equal parts, each part printed in half of the total run of the edition contracted for: a war-time method for conserving newsprint heretofore used only for testing advertising copy.
- staging area.** The point of embarkation of troops en route to combat areas. In psychiatry, it serves as a final pre-combat test of the stamina of the soldier and provides an index of the effectiveness of the earlier screening process.
- Stalag.** Abbreviation for *Stammlager* (base camp), a permanent German camp for prisoners of war, especially non-commissioned officers and privates, or for labor detachments.
- Sten gun.** A light-weight, rapid-fire British submachine gun designed after Dunkirk by two Englishmen who named it from the initials of their last names (Sheppard and Turpin) plus the first two letters of *EN*gland. Uses 9 mm (.35 cal.) Parabellum cartridges and enemy cartridges of same size and length; weighs less than 10 lbs. fully loaded; fires 550–600 shots a minute at effective range of 200 yards; has an overall length of 30–35 inches; is tough, versatile, extremely simple, and in mass production costs from \$10 to \$20 per piece.
- sulfallantoin.** A recent member of the sulfa drug family, reported to be efficacious in the treatment of wounds, compound fractures, burns, ulcers, and certain infections of the eye, ear, nose, and throat.
- sulfamerazine.** A recent sulfa drug considered to have advantages over sulfamethazine in the treatment of pneumococcus infection by oral administration.
- Syrette.** Trade name for a miniature syringe; especially, a small disposable tube for the emergency administration of morphine, as on the battlefield.
- task force.** A tactical military unit consisting of elements drawn from different branches of the armed services and assigned to execute a specified mission.
- tectonophysics.** A branch of geophysics which deals with the forces causing movement in, and deformation of, the earth's crust, especially the flow and rupture of earth features due to earthquakes, volcanos, submarine upheavals, etc.
- thioestrone.** A sulfur compound of the sex hormone estrone; synthesized by Dr. W. A. Malisoff and Eda Malisoff.
- thiouracil.** One of a group of sulfur-containing organic compounds which has been experimentally effective in the treatment of hyperthyroidism or goiter. Another member of the group, thiourea, long known to chemists, has been similarly tried.
- tracer cutback.** An optical illusion which leads inexperienced airplane gunners to misinterpret the actual course and direction of a stream of tracer bullets from their guns, thus reducing the accuracy of fire.
- Tri-Metrogon.** A high-speed system of aerial mapping first used in the summer of 1941 by two American specialists, Col. M. H. Kaye and G. Fitz Gerald. The plane carries a unit of three wide-angle cameras of six-inch focal length, one camera vertical, the other two at matching oblique angles. Each exposure covers a six-mile strip from horizon to horizon, and as much as 20,000 square miles can be photographed in less than half a day. See **PHOTOGRAPHY**.
- triphilian.** Word coined by Prime Minister Winston Churchill to describe a joint military, naval, and air operation, co-ordinating all arms of the service and all weapons in a simultaneous action. The term **triphilian** was previously coined by George Fielding Eliot for the same meaning.
- triptane.** A hydrocarbon of the methane series, known to chemists as 2,2,3-trimethyl butane. Recently developed by industrial chemists as a powerful, high-octane aviation fuel about 50 per cent more efficient than the best gasoline now used.
- turbosupercharger.** A compact, highly effective supercharging device for the engines of airplanes operating at altitudes upwards of 25,000 feet. It drives the air-compressor supplying the engine by means of a turbine which utilizes exhaust gases having temperatures as high as 1,700° F. even in an atmosphere of 100° below zero.
- Unitas.** Proposed name for an American unit of international monetary value for use among participating nations in the postwar period. Devised by Harry D. White, a research specialist of the U.S. Treasury.

- Uralloy.** A plastic material made by treating green wood with a solution of urea, drying, and shaping the product under heat. By adding a resin-forming chemical and modifying the treatment, a heat-resisting variety may be obtained.
- Victory edition.** An edition of an American daily newspaper cut to eight or ten pages to conserve paper. Usually issued on Mondays or Saturdays.
- Valley fever.** Popular name for a disease, also called in California the San Joaquin fever and technically known as primary pulmonary coccidioidomycosis, caused by inhaling the spores of a certain fungus. Its effects—chest pains, chills, fever, and coughing—have interfered with troop maneuvers on the West coast.
- Vansittartism.** The doctrine that the entire German people share the responsibility for militarism, aggression, and war equally with the Nazi regime, and should be treated after the war on this assumption. Associated with the expressed views of Lord Robert Vansittart, former Permanent Under-Secretary of the British Foreign Office.
- V-disk.** A phonograph record made especially for the entertainment and recreation of American troops. Developed by Capt. Robert Vincent for the Music Section of the Special Services Division, with the cooperation of manufacturers and artists.
- Vestibule center.** An occupational and vocational guidance center for assisting in the effective return to civilian life of the men to be demobilized after the war. It forms a part of the large-scale rehabilitation program worked out by Carl A. Gray, former Connecticut State Director of the W.P.B. and originator of the "Connecticut Plan" for job training.
- Vibeston.** Trade name for a new, light-weight sound insulator made of asbestos and other non-strategic materials by the U.S. Rubber Co. It is 50 per cent lighter than mica and effectively decreases noise and vibration.
- Victory ship.** A fast cargo ship of the American merchant marine, superior in design and performance to the former Liberty ships. See SHIPBUILDING.
- Vitamer.** Any of a group of compounds which act more or less as a unit to produce a given physiological effect, especially in relation to vitamins. See *isotel*.
- VT loans.** Government guaranteed bank loans to war contractors. See BANKS AND BANKING.
- Walkie-talkie.** A high-powered portable radio set, including both transmitter and receiver, which can be carried and used by one man. See MILITARY PROGRESS.
- Warshipopencargo.** A special form of open cargo war risk insurance. See SHIPPING.
- white noise.** Nerve-racking and objectionable noise caused by the indiscriminate mixing of all sound frequencies into one continuous assault on the ears, as in an airplane: so named on the analogy of white light (a mixture of all wave lengths).
- Winnie.** A bronze figure sculptured by Malvina Hoffman, instituted as a fashion award for American designers in 1943. See FASHION EVENTS.
- yellowhead.** A United States currency note originally issued for use in Sicily; it is imprinted with a yellow seal carrying the name of the place of circulation.

FIFTEEN MILITARY HIGHLIGHTS OF THE YEAR

Legend:

- United Nations
- Axis & Axis partners
- Nonbelligerents
- Areas taken by United Nations since Jan 1, 1943
- Areas taken by Axis since Jan 1, 1943

Map Details:

- Europe:** 1. Axis advance into the Balkans; 2. Axis advance into the Caucasus; 3. Axis advance into the Balkans; 4. Axis advance into the Balkans; 5. Axis advance into the Balkans; 6. Axis advance into the Caucasus; 7. Axis advance into the Caucasus; 8. Axis advance into the Caucasus; 9. Axis advance into the Caucasus; 10. Axis advance into the Caucasus; 11. Axis advance into the Caucasus; 12. Axis advance into the Caucasus; 13. Axis advance into the Caucasus; 14. Axis advance into the Caucasus; 15. Axis advance into the Caucasus.
- North Africa:** 1. Axis advance into the Balkans; 2. Axis advance into the Caucasus; 3. Axis advance into the Balkans; 4. Axis advance into the Balkans; 5. Axis advance into the Balkans; 6. Axis advance into the Caucasus; 7. Axis advance into the Caucasus; 8. Axis advance into the Caucasus; 9. Axis advance into the Caucasus; 10. Axis advance into the Caucasus; 11. Axis advance into the Caucasus; 12. Axis advance into the Caucasus; 13. Axis advance into the Caucasus; 14. Axis advance into the Caucasus; 15. Axis advance into the Caucasus.
- Asia:** 1. Axis advance into the Balkans; 2. Axis advance into the Caucasus; 3. Axis advance into the Balkans; 4. Axis advance into the Balkans; 5. Axis advance into the Balkans; 6. Axis advance into the Caucasus; 7. Axis advance into the Caucasus; 8. Axis advance into the Caucasus; 9. Axis advance into the Caucasus; 10. Axis advance into the Caucasus; 11. Axis advance into the Caucasus; 12. Axis advance into the Caucasus; 13. Axis advance into the Caucasus; 14. Axis advance into the Caucasus; 15. Axis advance into the Caucasus.
- Pacific:** 1. Axis advance into the Balkans; 2. Axis advance into the Caucasus; 3. Axis advance into the Balkans; 4. Axis advance into the Balkans; 5. Axis advance into the Balkans; 6. Axis advance into the Caucasus; 7. Axis advance into the Caucasus; 8. Axis advance into the Caucasus; 9. Axis advance into the Caucasus; 10. Axis advance into the Caucasus; 11. Axis advance into the Caucasus; 12. Axis advance into the Caucasus; 13. Axis advance into the Caucasus; 14. Axis advance into the Caucasus; 15. Axis advance into the Caucasus.

8. Aug. 25—Mountbatten appointed commander of Southeastern Asia.
9. Sept. 3—British land in Italy.
10. Nov. 21—Americans invade Gilbert Islands.
11. Nov. 28—Dec. 1—Tehran meeting maps Allied strategy.
12. Dec. 9—Chinese recapture Changteh.
13. Dec. 16—Allied forces land on New Britain.
14. Dec. 26—British sink the *Scharnhorst*.
15. Dec. 30—Russians win Battle of the Kiev bulge.

UNIVERSAL
LIBRARY



128 500

UNIVERSAL
LIBRARY